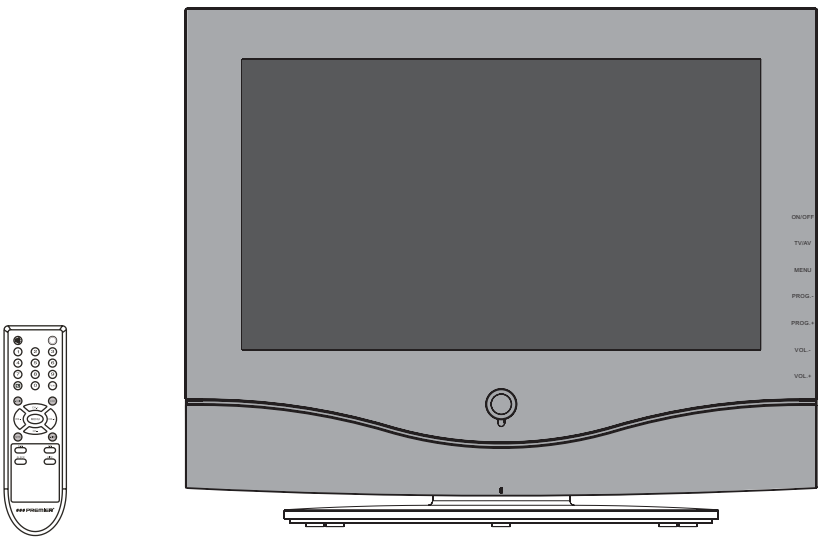
SERVICE MANUAL

8D60S CHASSIS



Design and specifications are subject to change without prior notice.

(ONLY REFERRENCE)

ENGINEER BY: _____ CHECKED BY: _____ PPROVED BY: _____

Note

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Technical Specification

1.Application Area:

This product standard is used to the base of LCD 26" - 37"

2.Specification:

ALL standard are measured under the following conditions without other specification.

2.1 Ambient Temperature : 20±5℃

2.2 Relative Humidity : 65±10%

2.3 Power Supply Voltage: Standard Input Voltage (110 ~ 240 V ac 50/60Hz)

2.4 The TV should be measured after working 20 minutes。

3.Method of examination

3.1 capability : According to national test standard

3.2 Other requirements:

Interference (EMC) : according to FCC standard

SAFETY: according to UL standard

4.General Specification

No	Item	Specification	Remark
1.	Receive and send manner	PAL/NTSC	
2.	Receive Channel	VHF :E2~E13 CATV:S1~S125 UHF: E14~E69	181CH
3.	Input Voltage	AC 110~240V, 50/60Hz	
4.	Market	Southeast Asia,Taiwan	
5.	Picture size	26" ~37"	
6.	Tuning System	PLL System	
7.	Operating Environment	1) Temp : 0 ~ 40 deg 2)Humidity : 40 ~ 85 %	
8.	StorageEnvironment	3)Temp : -20 ~ 50 deg 4)Humidity : 30 ~ 90 %	

5. Feature and Function

No	Item	Specification	Remark
1)	REMOCON	TOSHIBA Code	
2)	SCARTInput	X	
3)	Component input	1 YPbPr	
4)	HDMI input	1 OR 2	
1.	S-VIDEO	1	
2.	RGB Input	1 VGA	
3.	2 Carrier Stereo	BTSC STEREO	
4.	NICAM Stereo	X	
5.	2 Carrier Dual	BTSC SAP	

6.	NICAM Dual	X	
7.	SSC (Split Screen) Mode	X	
8.	MUP (Multi Picture Display) Mode	X	
9.	Film Mode	YES	
10.	Noise Reduction	YES	
11.	Progressive Scan	YES	
12.	Motion Detection	X	
13.	Dolby Virtual	X	
14.	Swivel Speaker	X	

6. Safety and Regulation

No	Item	Min	Typ	Max	Unit	Remark
1.	Force Stability - Incline Plane Tip Test				deg	
2.	Force Stability - Level Tip Test				N	
3.	Isolation Gap, AC-AC/ AC-DC	3			mm	
4.	Isolation Gap, insulated-electric	6			mm	
5.	Power Consumption, Max		200		W	26''/32'' IEC 65
6.	Power Consumption, Stand by			<2	W	
7.	Power Consumption, Current harmonics					IEC 107-1
2)	Dielectric Voltage	3			kV	at 10 mA, for 1 minutes
8.	Isolation Resistance	4			MΩ	
9.	Leakage Current		0.7		mApp	
10.	Power Cord Captivity				kg	
11.	Flammability - Back Cover		V0			UL94
3)	Sharp Edge	none				
4)	UL Compliance					UL 6500
12.	FCC Compliance					FCC PART 15
13.	CDRH Radiation Compliance					
14.	CSA Compliance					
15.	CEB Compliance					
16.	CE Compliance					
17.	CB Compliance					

7. Video

No	Item	Min	Typ	Max	Unit	Remark
1.	Linearity Distortion, Vertical				%	
2.	Linearity Distortion, Horizontal				%	
3.	Trapezoidal Distortion, Vertical				%	
4.	Trapezoidal Distortion, Horizontal				%	
5.	Over Scan, Vertical				%	
6.	Over Scan, Horizontal				%	

7.	Brightness, Maximum		500		cd/m^2	
8.	Video Noise Limited Sensitivity(@S/N=30db) VHF			48	dBm	
9.	Video Noise Limited Sensitivity(@S/N=30db) UHF			51	dBm	
10.	Selectivity -1.5M	35			dB	
11.	Selectivity +8M	40			dB	
12.	Tuning Range	-0.75		1	MHz	
13.	Resolution Horizontal	640			Lines	
14.	Resolution Vertical	480			Lines	

8. Chroma

No	Item	Min	Typ	Max	Unit	Remark
1.	Purity (mislanding)				um	
2.	Convergence				mm	
3.	White Balance, X axis					
4.	White Balance, Y axis					
5.	White Balance, Color Temperature			12000	kdeg	
6.	Color Sensitivity			45	dB	
7.	Color Burst Lock-in Range	+/-300			Hz	
8.	Color Killer Sensitivity			-80	dBm	

9. Audio

No	Item	Min	Typ	Max	Unit	Remark
1.	Audio Noise Limited Sensitivity, VHF-L			42	dBm	
9.	Audio Noise Limited Sensitivity, VHF-L			42	dBm	
2.	Audio Noise Limited Sensitivity, UHF			48	dBm	
3.	Buzz (S/N Ratio)	40			dB	
4.	Min. Volume Hum			20	mV	
5.	Distortion			10	%	
6.	Audio Output, L/R,at 7 % THD			20x2	W	

7.	Audio Output, Center				W	
8.	Audio Output, Woofer				W	
9.	Stereo Separation				dB	
10.	Speaker Impedance		8		ohm	
11.	Speaker Power Rating			10	W	
12.						
13.						
14.						
15.						

10. Power

No	Item	Min	Typ	Max	Unit	Remark
1.	AC Power Shut Down Voltage	100		264	V	
2.	DC Voltage, CRT Drive				V	
3.	DC Voltage, FBT Drive		24		V V	
4.	DC Voltage, Audio		24		V	
5.	DC Voltage, Vertical +				V	
6.	DC Voltage, Vertical -				V	
7.	DC Voltage, VCD(8)				V	
8.	DC Voltage, VCD(5)				V	
9.	DC Voltage, Tuner(5)		5		V	
10.	DC Voltage, Tuning(32)				V	
11.	DC Voltage, MICOM(5)				V	
12.	DC Voltage, MICOM(5)				V	
13.	CRT Heater Voltage				V	
14.	High Voltage				kV	
15.	High Voltage Regulation				kV	
16.	Beam Current				mA	

11. External Interface

No	Item	Min	Typ	Max	Unit	Remark
1.	Video Input Level	0.85	1	1.15	Vpp	
2.	Video Input Frequency Response	4.5			MHz	
3.	Video Input S/N	40			dB	
4.	Audio Input Level	0.4	0.5	0.6	Vrms	
5.	Audio Input Frequency Response	0.1		7	kHz	
6.	Audio Input S/N	40			dB	
7.	Audio Input Distortion			2	%	
8.	Audio Input Dynamic Range	2			V	

9.	Video Output Level	0.85	1	1.15	Vpp	
10.	Video Output Frequency Response	3.8			MHz	
11.	Video Output S/N	40			dB	
12.	Audio Output Level	0.4	0.5	0.6	Vrms	
13.	Audio Output Frequency Response	0.1		7	kHz	
14.	Audio Output S/N	40			dB	
15.	Audio Output Distortion			2	%	
16.	Video Input Level, R/G/B				Vpp	
17.	Video Input Level, Component(Y, P^B, P^R)	0.6	0.7	0.8	Vpp	75 ohm
18.	RGB Input Resolution, Vertical				pixel	
19.	RGB Input Resolution, Horizontal				pixel	
20.	RGB Input Horizontal Frequency				kHz	
21.	RGB Input Frame Rate				Hz	

12. The others

No	Item	Min	Typ	Max	Unit	Remark
1.	Search Sensitivity	-95	-90	-85	dBm	
2.	CRT Heating Time			7	sec	
3.	Soft Ware Functionality Test					
4.	REMOCON Working Sensitivity, Straight	8			m	
5.	REMOCON Working Sensitivity, T/B/L/R	6			m	
6.	Closed Caption Sensitivity			-70	dBm	
7.	Teletext Sensitivity				dBm	
8.	Resonance of unit (Sweep freq : 50 ~ 1000)	none				
9.	Clock, real time gain or loss(sec per day)				sec	

13. Customer Menu Setup (as shipped condition)

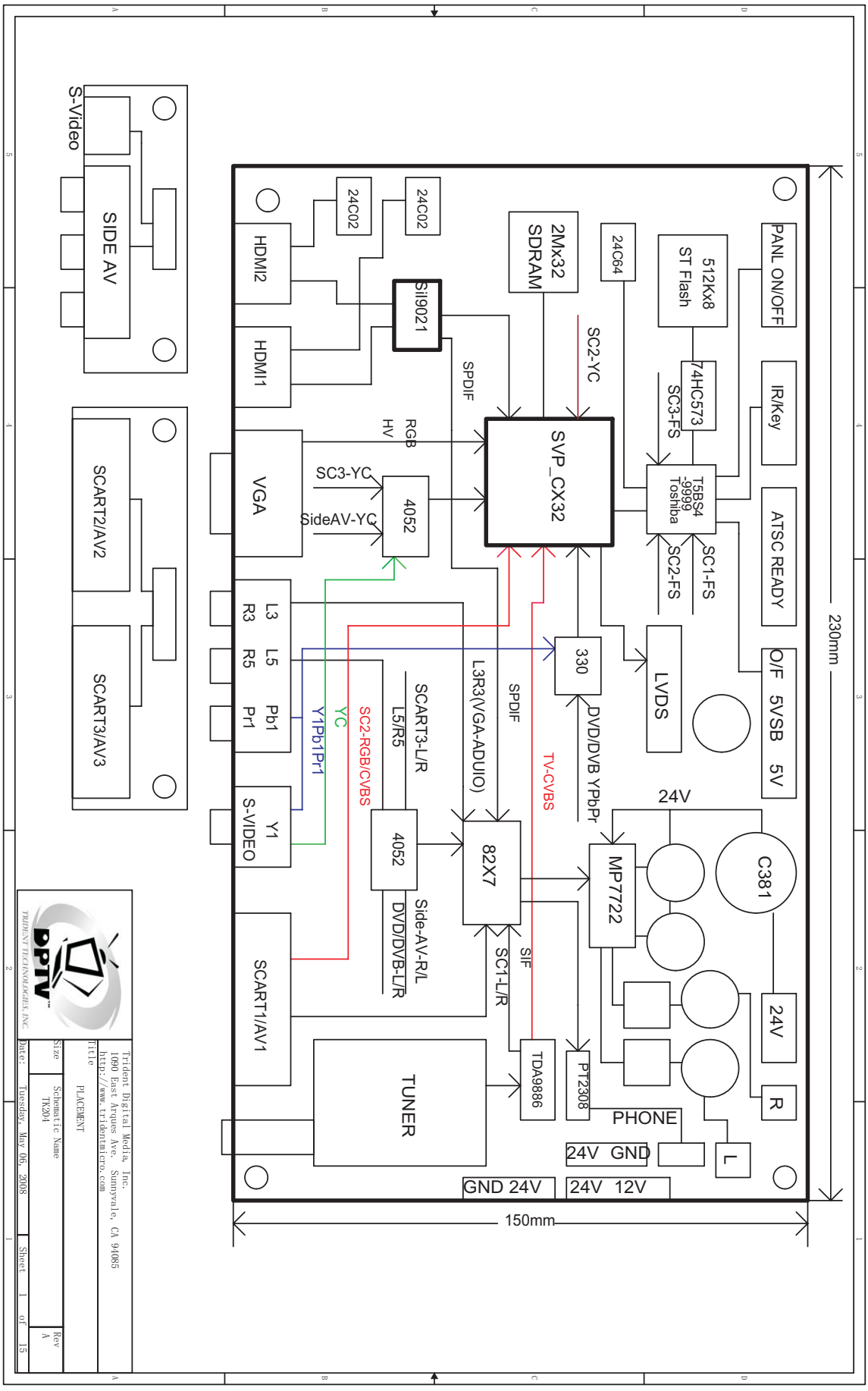
No	Item	Min	Typ	Max	Unit	Remark
1.	PSM	Movies				
2.	SSM	Music				
3.	Volume	30				
4.	Mute	Off				
5.	Input Mode	RF				
6.	Customer Menu Language	English				customer define
7.	AVL	Off				

8.	Sleep Timer	Off	
9.	Auto Sleep	Off	
10.	Blue Back	Off	
11.	Surround	On	
12.	Caption	Off	
13.	Noise Reducer	AUTO	

14. Reliability

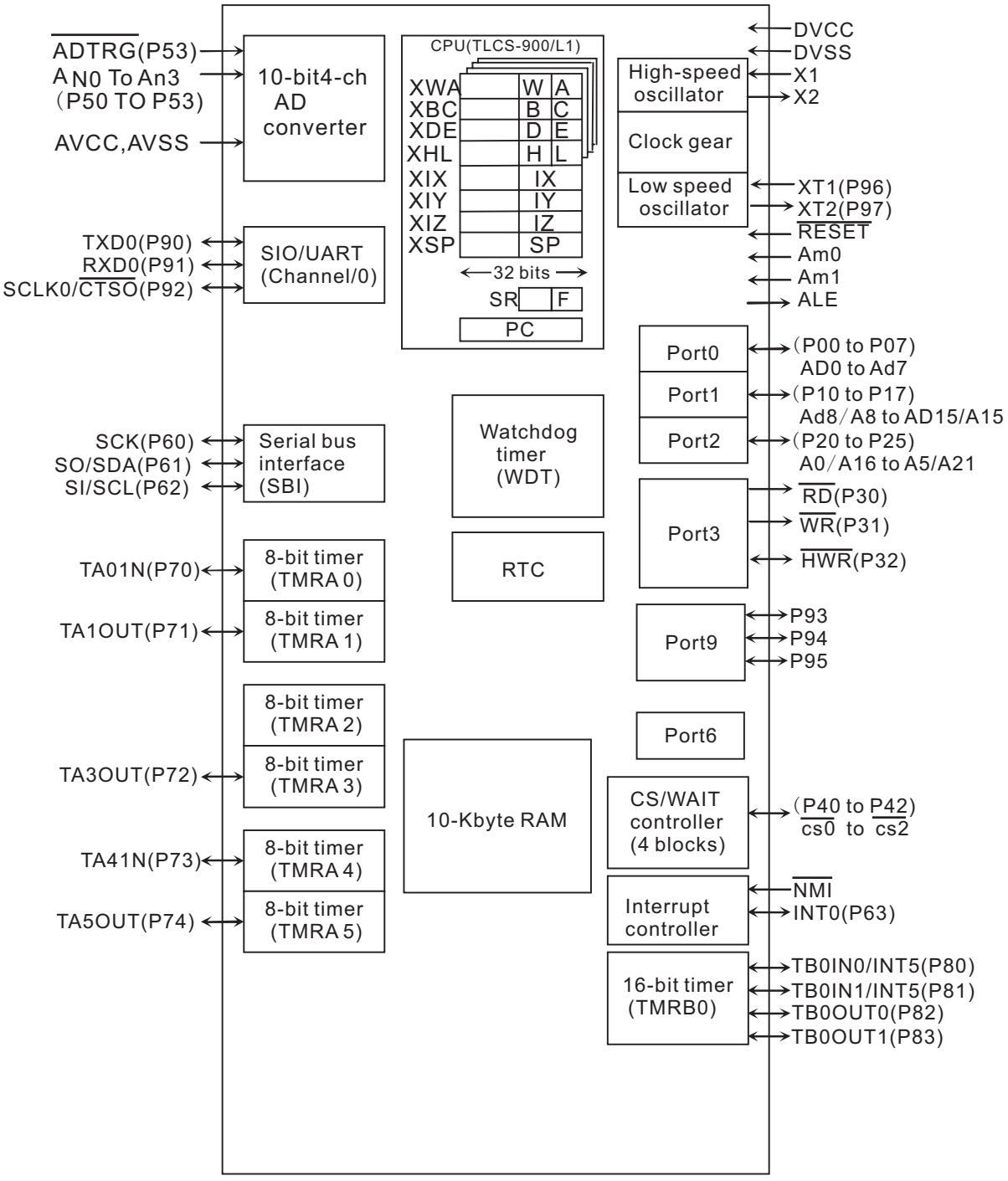
No	Item	Min	Typ	Max	Unit	Remark
1.	ESD	4			kV	IEC-1000-4-2
2.	EFT/Burst	2			kV	IEC-1000-4-4
3.	Surge Immunity	30			kV	IEC-1000-4--5
4.	Voltage Dip Test, 10ms	100			%	IEC-1000-4-11
5.	Voltage Dip Test, 100ms				%	IEC-1000-4—11
6.	Operation Temperature	0	25	45	deg	
7.	Operation Humidity	10		90	%	
8.	Storage Temperature	-20		60	deg	
9.	MTBF (Confidence Level : 90 %)	10000			hour	
10.	Ship Test					

Chassis Block Diagram



IC Block Diagram

U4



T5BS4-9999 Block Diagram

IC Block Diagram

the pin assignment of the T5BS4-9999.

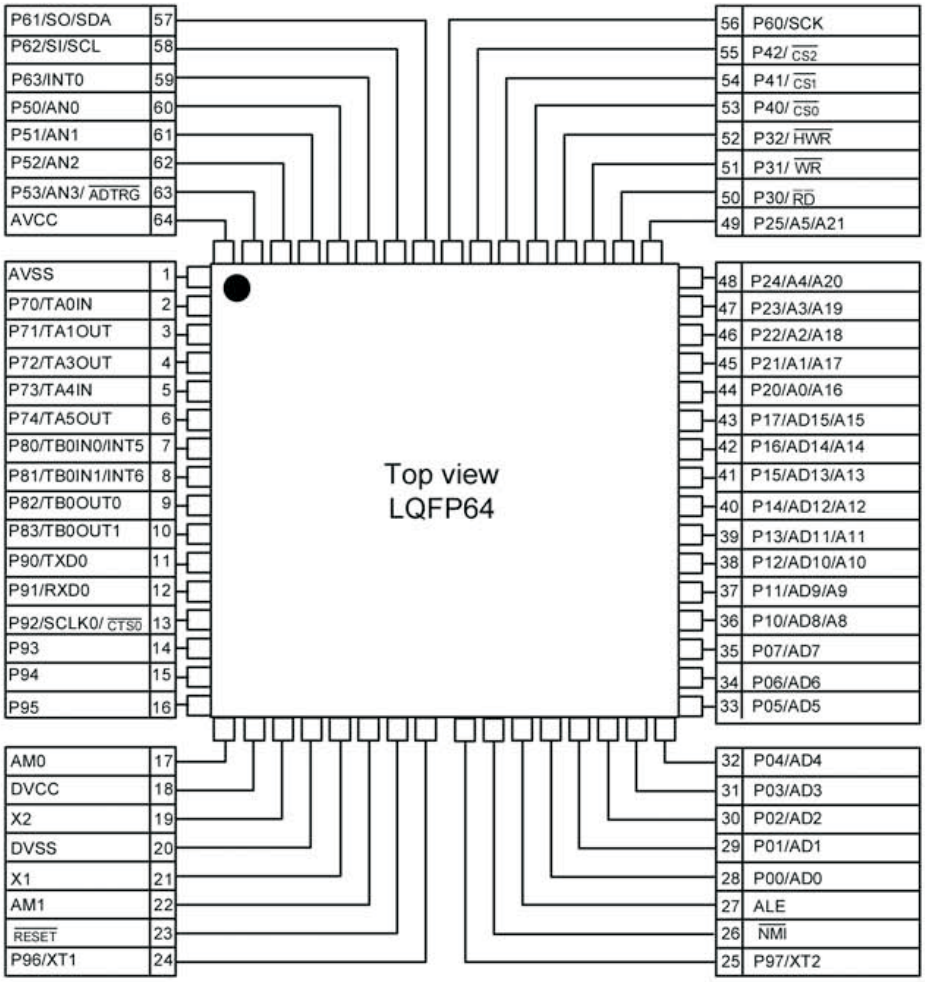


Figure 2.1 Pin Assignment Diagram (64-pin LQFP)

IC Block Diagram

U9,U29(4-CHANNEL ANALOGUE MULTIPLEXER)HEF4052BT

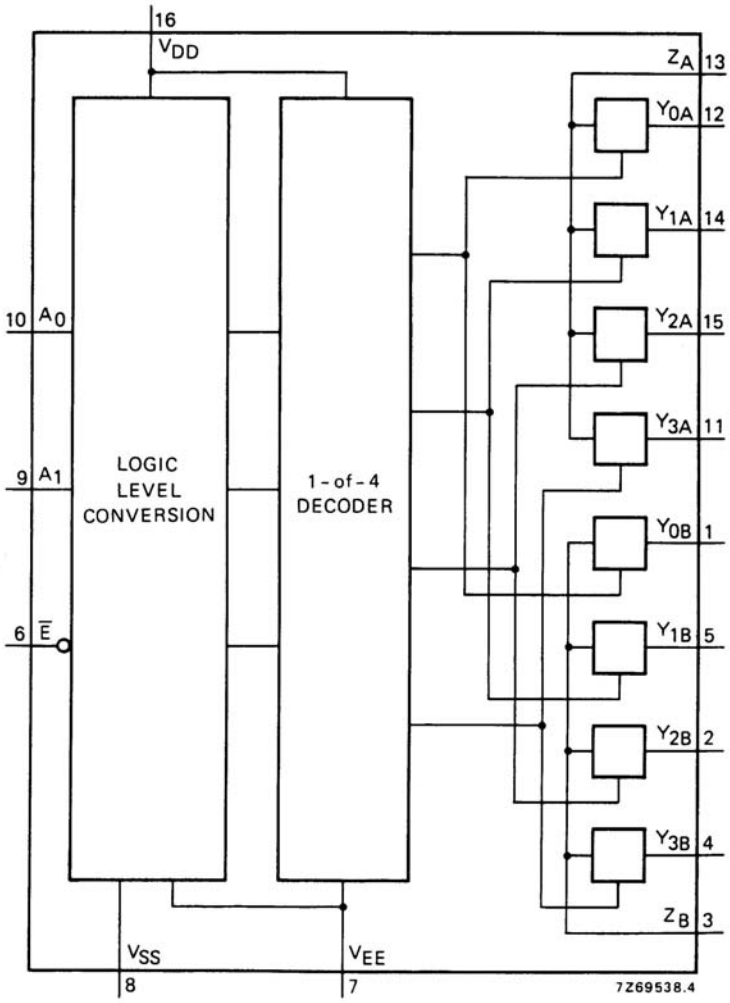


Fig.1 Functional diagram.

PINNING

Y_{0A} to Y_{3A}	independent inputs/outputs
Y_{0B} to Y_{3B}	independent inputs/outputs
A_0, A_1	address inputs
$\overline{E}$	enable input (active LOW)
Z_A, Z_B	common inputs/outputs

FAMILY DATA,
I_{DD} LIMITS category MSI

See Family Specifications

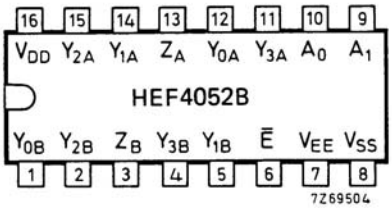


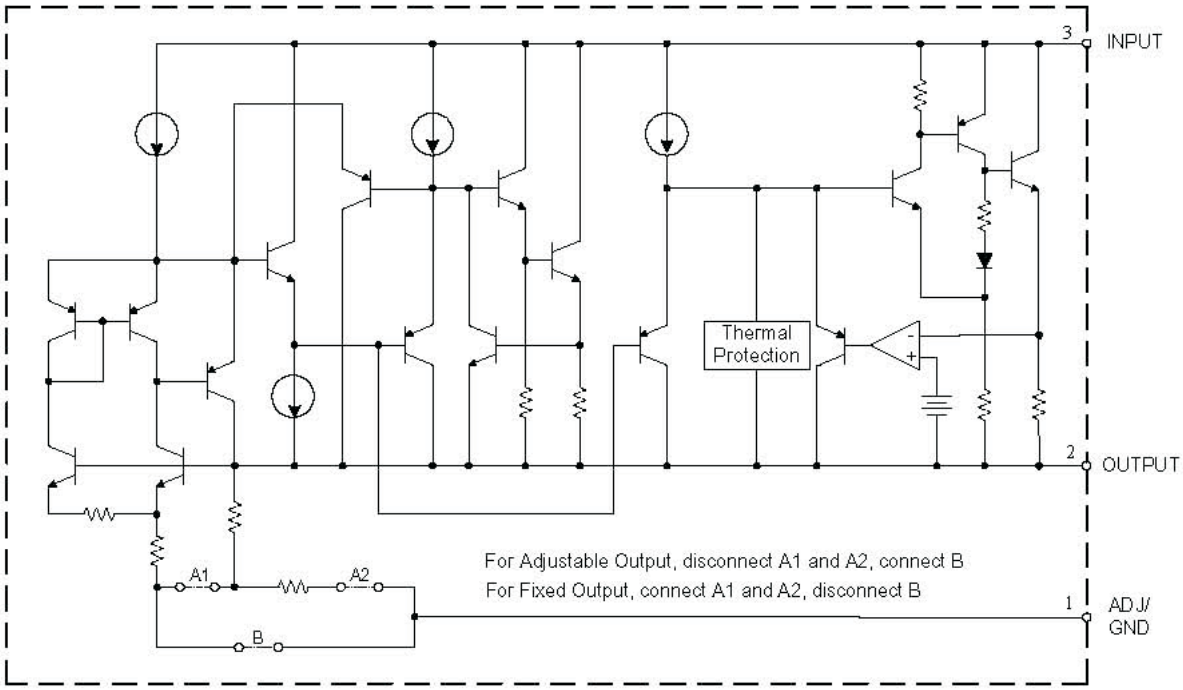
Fig.2 Pinning diagram.

HEF4052BP(N): 16-lead DIL; plastic (SOT38-1)
HEF4052BD(F): 16-lead DIL; ceramic (cerdip) (SOT74)
HEF4052BT(D): 16-lead SO; plastic (SOT109-1)
( ): Package Designator North America

IC Block Diagram

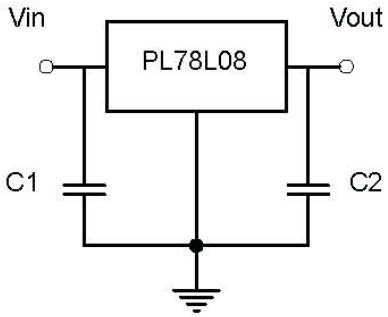
U23(5A LOW DROPOUT LINEAR REGULATOR)1.8V TO-263-3

Functional Block Diagram



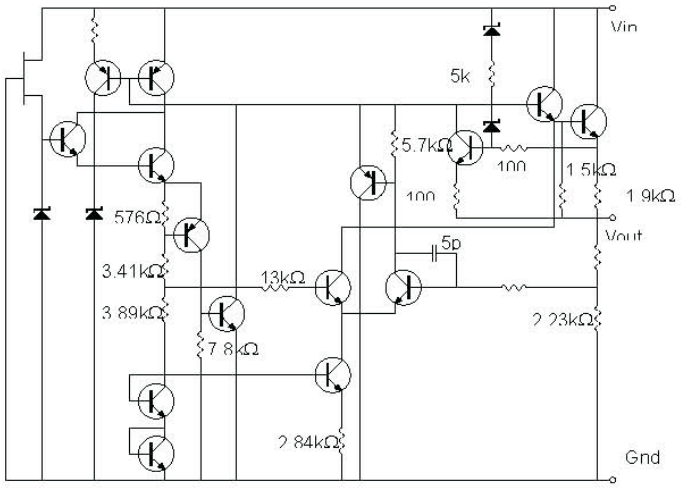
U28

Typical Application



Note:
C1 and C2 are required if regulator is located far from power supply filter and load, or oscillation may induced on the loop.

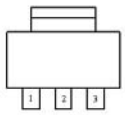
Schematic Diagram



IC Block Diagram

U22,U24,U31,U32(1A LOW DROPOUT VOLTAGE REGULATOR)AMS1117-1.8

SOT-223 Top View



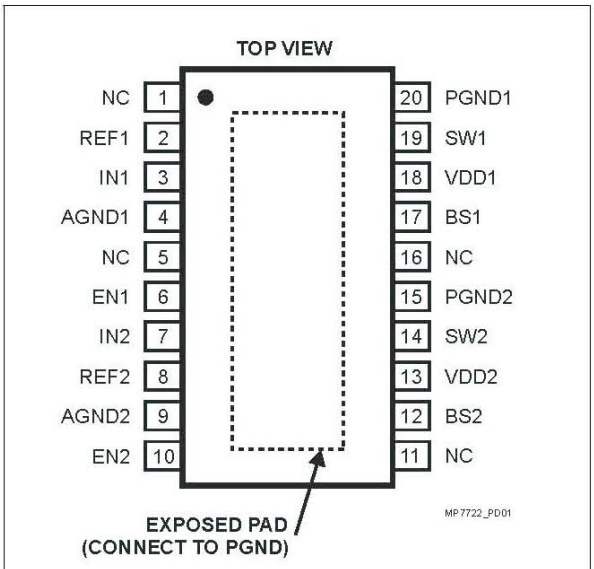
PIN CONNECTIONS

FIXED VERSION	ADJUSTABLE VERSION
1- Ground	1- Adjust
2- V_{OUT}	2- V_{OUT}
3- V_{IN}	3- V_{IN}

TO-252 FRONT VIEW

U33(STEREO SINGLE ENDED AUDIO AMPLIFER)MP7722DF

PACKAGE REFERENCE



Part Number*	Package	Temperature
MP7722DF	TSSOP20F	–40°C to +85°C

* For Tape & Reel, add suffix –Z (eg. MP7722DS–Z)
For Lead Free, add suffix –LF (eg. MP7722DS–LF–Z)

ABSOLUTE MAXIMUM RATINGS (1)

Supply Voltage V_{DD} 26V
BS Voltage ..... V_{SW} – 0.3V to V_{SW} + 6.5V
Enable Voltage V_{EN} ..... –0.3V to +6V
V_{SW}, V_{PIN}, V_{NIN} ..... –1V to V_{DD} + 1V
AGND to PGND ..... –0.3V to +0.3V
Junction Temperature ..... 150°C
Lead Temperature ..... 260°C
Storage Temperature ..... –65°C to +150°C

Recommended Operating Conditions (2)

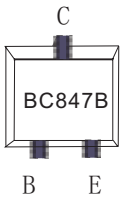
Supply Voltage V_{DD} ..... 9.5V to 24V
Operating Temperature T_A ..... –40°C to +85°C

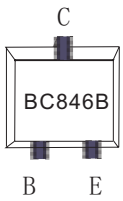
Thermal Resistance (3)

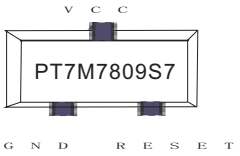
	θ_{JA}	θ_{JC}	
TSSOP20F	40	6....	°C/W

Notes:
1) Exceeding these ratings may damage the device.
2) The device is not guaranteed to function outside of its operating conditions.
3) Measured on approximately 1" square of 1 oz copper.

Transistor Mark

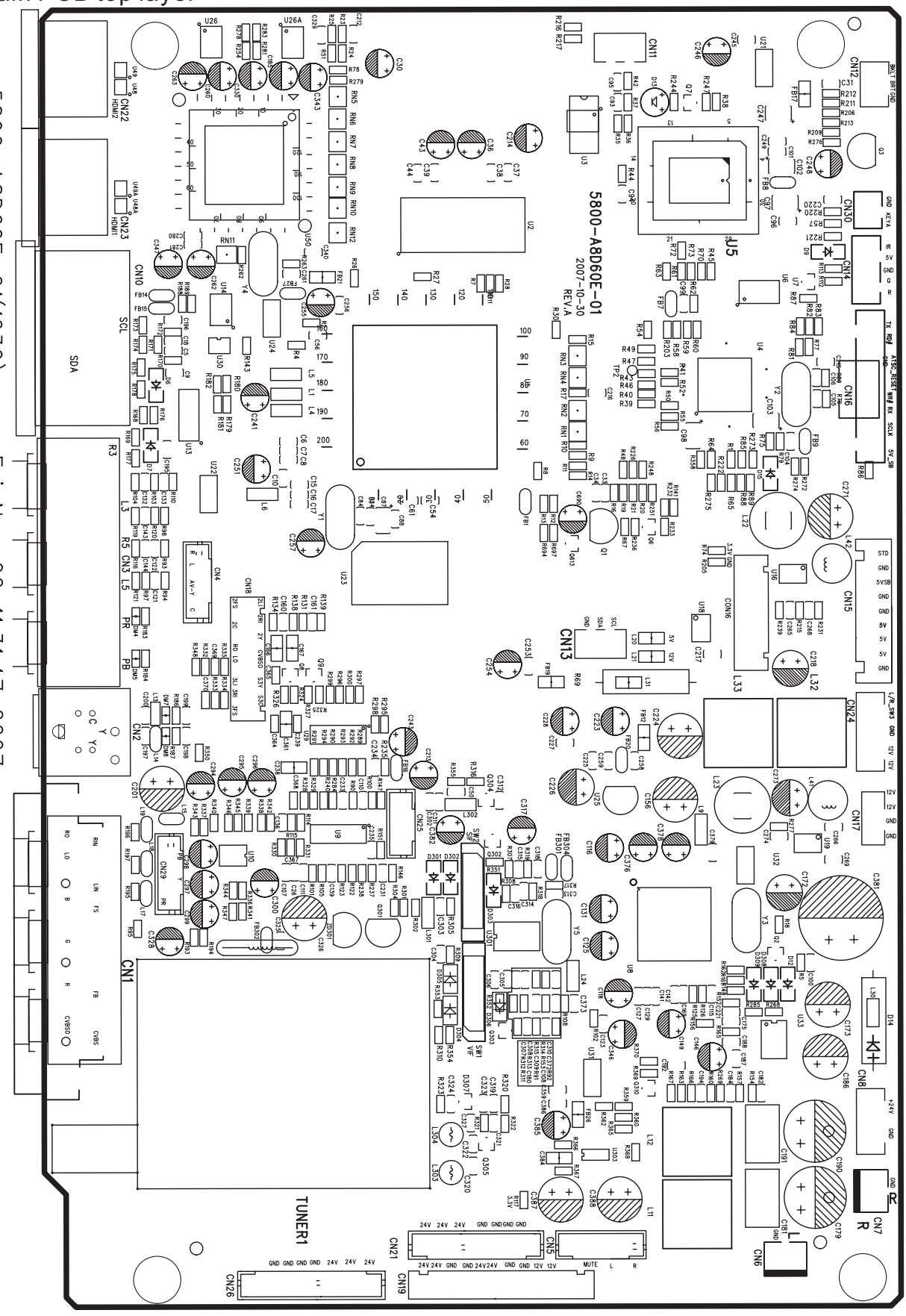






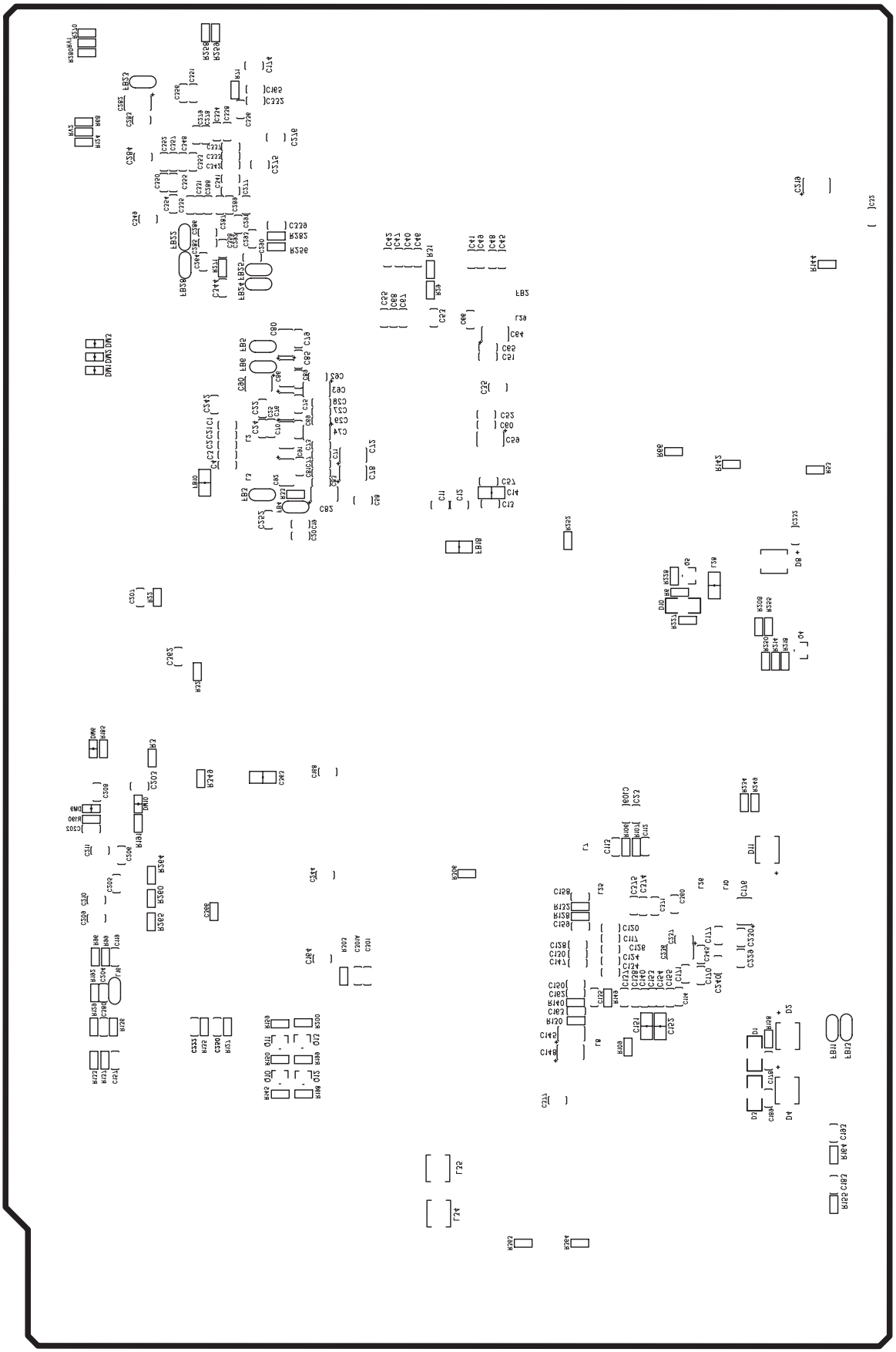
Main PCB Top/Bottom Layer

Main PCB top layer



Main PCB Top/Bottom Layer

Main PCB bottom layer



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Service Adjustments

1.Application Area:

This product standard is used for 8D60E LCD TV。

2.Specification:

2.1 The LCD uses AC power supply, so please use 220VAC directly.

2.2 The power supply should keep the rating voltage 110~240 VAC 50 / 60 Hz。

2.3 Ambient conditions: All the standards are measured under following conditions without other specification.

1)Ambient temperature : 25 ℃ 5 ℃

2)Relative humidity : 60 % 20 %

2.4 If no prior notice, the TV set should work for more than 20 minutes before adjustment.

2.5 Equipments needed

-- Multimeter

Max Input Current : 1A 以上 / Max Input Voltage : 500Vdc

-- Measurement Range : 10Mvr~100Vdc / Accuracy : 0.03%

■ Oscilloscope:

Frequency Band : 20M above/Input Impedance : 1 above

Input Capacitance : 30pF below / Max Input Voltage : 250V

-- YPBPR/YCBCR

1080i/60Hz, 720P

-- Color TV Pattern Generator

2.6 Signal

IF no extra specify, the standard input COLOR BAR PATTERN signal is 60 ~ 80 dBu from factory centre or PM5418 signal generator

3. Software

3.1 Instructions

This chassis uses FLASH ROM to memory the program, and it can be re-rewritable.

The program is related to chassis function, the chassis with different functions should use different program edition.

4. Chassis checking

4.1 The upside of the chassis should be clear and no short or open circuit, no missing components or wrong polarity components insertion.

4.2 Check the input and output pins of 24V,12V,5V,3.3V，1.8V,regular IC (U23，U31，U32，U22，U24，U21),confirm no short circuit to GND

4.3 Connect the chassis to LCD panel and the power supply ,confirm 5V,3.3V,2.4V,1.8V from any regulators are OK.

4.4 Confirm OSD is OK, blue back appears without signals.

4.5 Confirm remote control functions and all collation keys control functions are OK.

4.6 Check searching function, save every factory TV signal, confirm the pictures in every system (PAL/BG/DK/I，SECAM L/L') are OK.

4.7 Confirm HDMI1/HDMI2/SCART1/SCART2/SCART3/YpbPr/picture and sound in/output are OK, confirm the picture and sound from PC are OK.

4.8 Confirm TELETEXT is OK.

4.9 Set into the whole machine, enter the aging line, set the TV to snowflake points state in the line.

5. Complete check

5.1 Check the pictures and sound in every system (PAL/BG/DK/I，SECAM L/L')are OK, check the picture and sound under weak and strong signal, check picture in low and high voltage power input mode.

5.2 check NICAM function

5.3 Confirm teletext function is OK.

5.4 Confirm HDMI1/HDMI2/SCART1/SCART2/SCART3/YpbPr/picture and sound in/output are OK,

confirm the picture and sound from PC are OK.

5.5 Check the remote control and the KYE-press can work normally, make sure it can make the TVset enter the standby mode and return to the normal mode. Check the sound and picture can be adjusted normally. Check the sound and picture ,make sure it can be adjusted normally.

6. Final setting

① PICTURE : DYNAMIC
② VOLUME : **30**
③ SOURCE : **TV**
④ SOUND SET : **BG (※)**
⑤ BLUE BACK : **ON**

※ special items set as the BUYER'S requirements。

7. Others

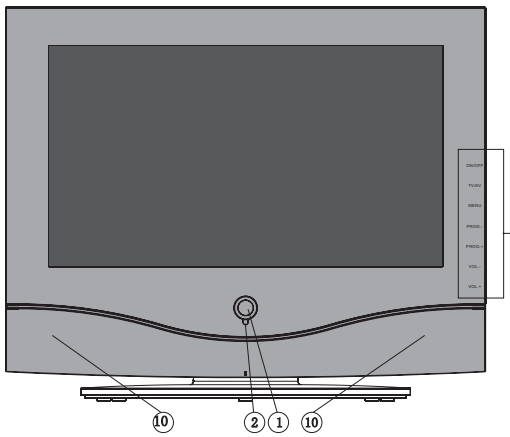
7.1 Because the LCD panel is high-tech product, please don't pull, crush or drop it, Please don't use the cloth that with high humidity to clean it, because the moisture may lead short. You can use some soft things to clean it, such as glasses cloth and camera lens

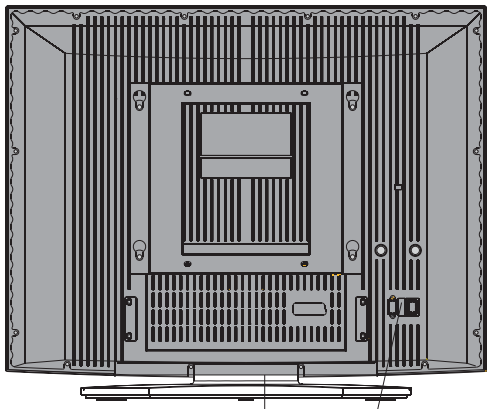
7.2 please pay attention to the high voltage in the INVERTER module output of the core. (About540Vrms @60KHz)

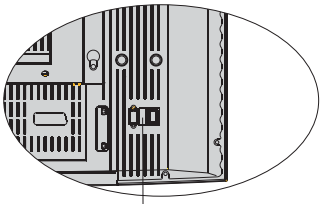
7.3 Because the power supply id inside, please pay attention to the 220VAC.

Control Location

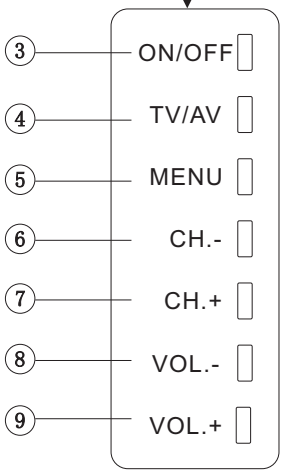
1. ON/OFF Switch/Power Indicator
2. Remote Sensor
3. ON/OFF Switch
4. TV/AV
5. MENU
6. CH.- Button
7. CH. +Button
8. VOL.-Button
9. V0L.+Button
10. Speakers
11. HDMI 2 Input
12. HDMI 1 Input
13. VGA Input
14. AUDIO IN 1
15. AUDIO IN 2
16. Y Pb Pr
17. S-Video
18. AV OUT
19. AV IN 1
20. Aerial input socket
21. Power Switch

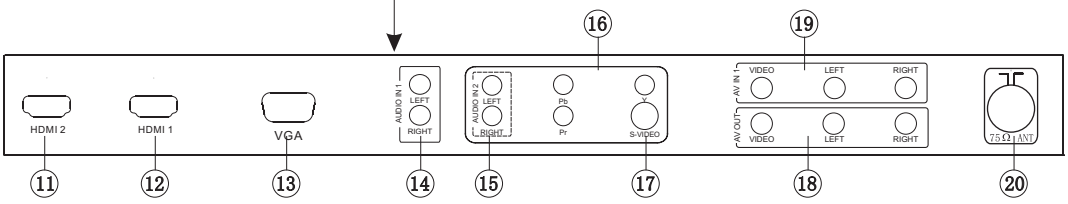






㉑ Power Switch





Control Location

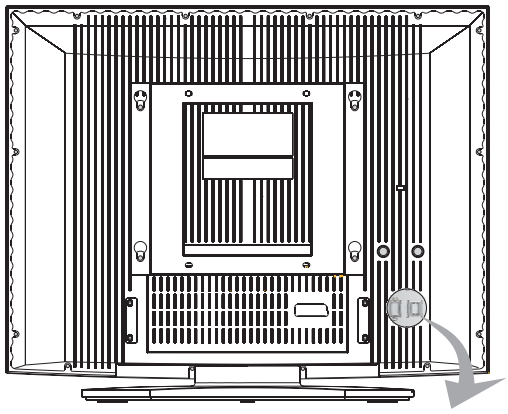
LOCATION OF CONTROLS

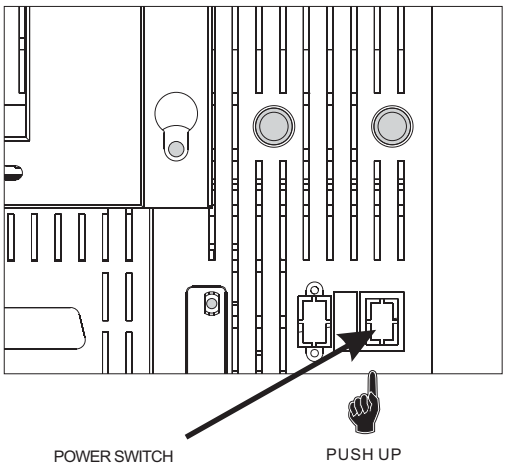
IMPORTANT INFORMATION

The power switch on this TV is factory set to its ON position. After connecting the mains cable to the TV and to a 90-260VAC mains supply the Standby Light should glow on the front panel. Insert the supplied batteries.

In the remote control and press the power button on the remote. The power Indicator will change colour to green and shortly afterwards the TV screen will glow. Follow the tuning information shown on page 11 of the instruction manual.

In the event that the TV does not power up after pressing the remote control power button please check that the mains cable is firmly pressed into the mains socket located on the TV and that the mains socket has power. Also check that the mains switch on the TV has not accidentally been turned off when inserting the mains plug on the TV. The mains switch is located to the side of the mains socket as shown in the accompanying diagram. Push the switch and check that the power indicator glows red on the right side of the TV front panel.

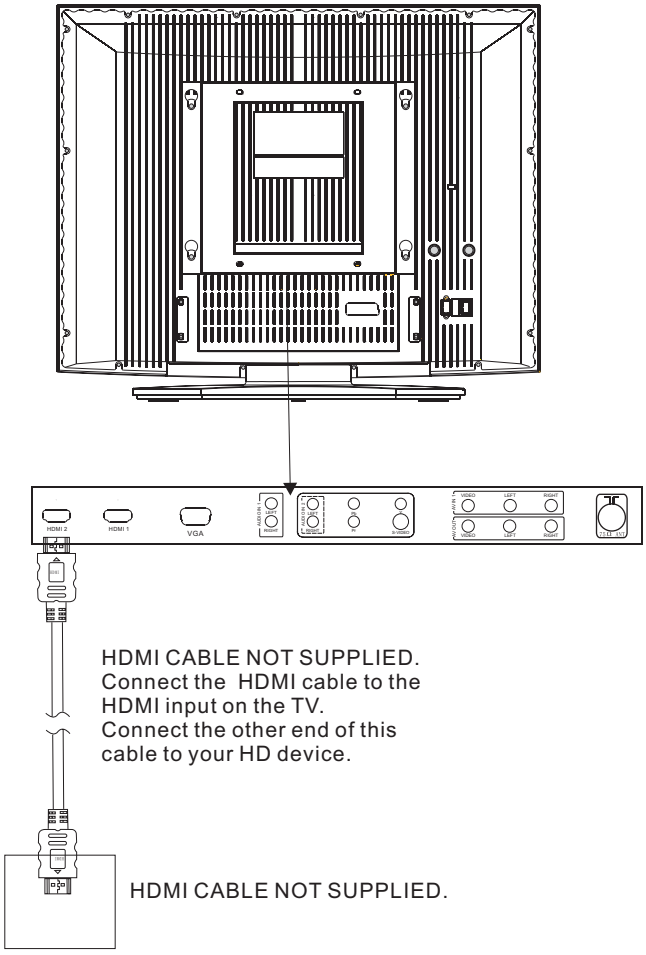




HDMI CABLE CONNECTIONS

- IMPORTANT INFORMATION Power off both HD player and display before making any connections. Connect the HDMI cable to the HDMI socket of the TV, connect the other end to the HDMI output socket of the HD player source.

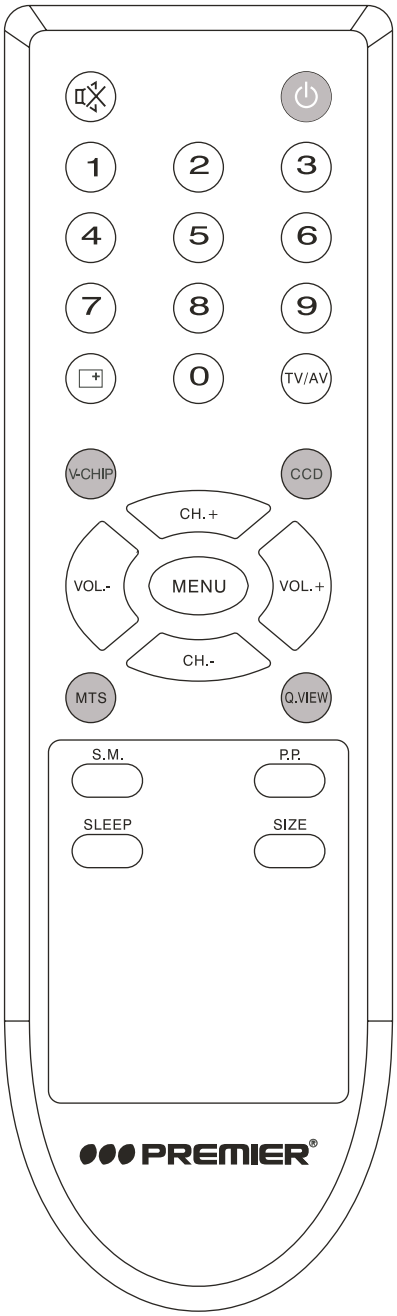
- Connect the HDMI cable to the HDMI socket of the TV. Connect the other end to the HDMI output socket of the HD player source, HDMI cable will carry both Video and audio signals from the HD source to the TV.



Operation Instructions

OPERATION INSTRUCTIONS

Remote Control Unit



1. POWER (STAND BY) BUTTON (⏻)
   Press this button to turn the TV on/off.

2. MUTE BUTTON (🔇)
   Press once to mute the sound, press again to return to preset sound level.

3. CHANNEL SELECTION BUTTONS (0-9)
   Use 0-9 digit buttons, you can call directly one or two digits program number that you want. when you only want to select one digit program number, you must press 0 button at first, then select a digit from 1-9. You press two digit buttons directly to select two digits program number.

4. DISPLAY BUTTON(⊡)
   Press this button to display the settings on the screen.(e.g. Channel number for TV input, sound mode, colour system).

5. TV/AV BUTTON
   Press this button to display external video signal such as TV/AV IN 1/S-VIDEO /YPbPr/PC/HDMI. Press CH.+/- button to select item and press VOL.+/- button to enter selected item.

6. V-CHIP BUTTON
   Press the button to enter the Parental MENU.

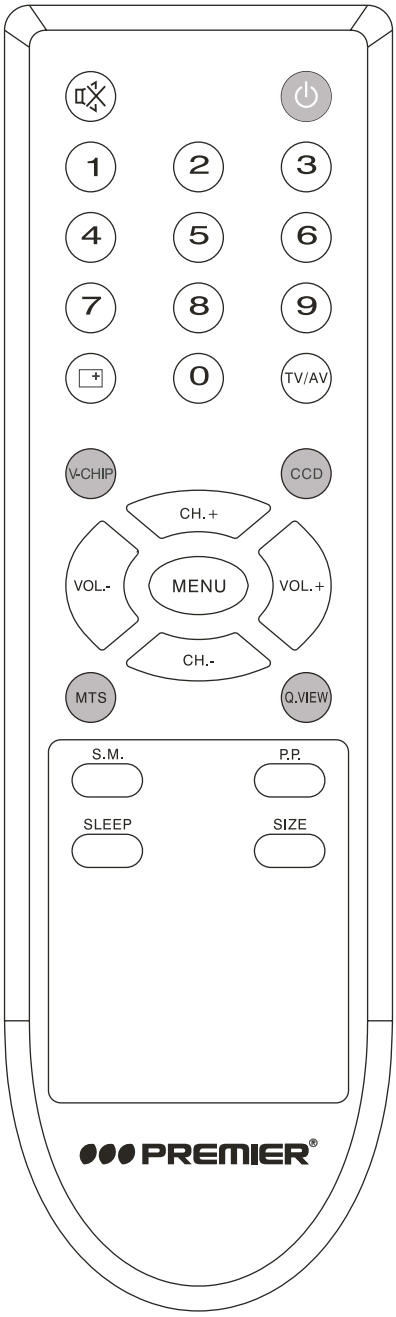
7. CCD BUTTON
   Press this button to enter the CCD MENU.

8. CHANNEL UP/DOWN BUTTONS (CH.+/-)
   Press the CH.+ button to select the program forwards. Press the CH.- button to select the program backwards.

9. VOLUME UP/DOWN BUTTONS (VOL.+/-)
   Press VOL.+/- buttons to adjust sound level. Or adjust the volume of each item in the menu status.

Operation Instructions

Remote Control Unit



10 MENU BUTTON
Press this button to enter the menu screens for various optional adjustable settings.

11 MTS BUTTON
This is a Stereo MTS function key. Press this key can change the stereo mode as the following turn.. Mono, Stereo and Sap.

12 QUICK VIEW BUTTON (Q.VIEW)
Press this button to return to the previously viewed program.

13 S.M. BUTTON
It can switch the sound mode in the following turn.
User→Pop→Rock→Live

14 PERSONAL PRESETS BUTTON (P.P.)
You can set the picture mode in User, Standard, Mild, Dynamic mode by pressing this button.

15 SLEEP BUTTON
Press this button to set the sleep timer as the following turn. When the preset length of time has passed, the TV set Enters standby mode.
off→15→30→45→60→90→120

16 SIZE BUTTON
TV/AV source, press this button to select:
Original /16:9 / 16:9 Zoom/ 16:9 Sub/14:9/ 14:9 Zoom/4:3/4:3 Zoom.
VGA/YPbPr/HDMI source, press this button to select:
Original / 16:9 and 4:3.

Operation Instructions

ANALOG MENU SCREENS

Menu Structure and Navigation

Use the following keys to navigate through the main menu:

Plug in the power source, the power indicator will light up. If TV is stand by mode.
Then press ⏻ key. The picture will display in few minutes.
Press menu button to display analog menu, and press **V +/-** to select sub menu.

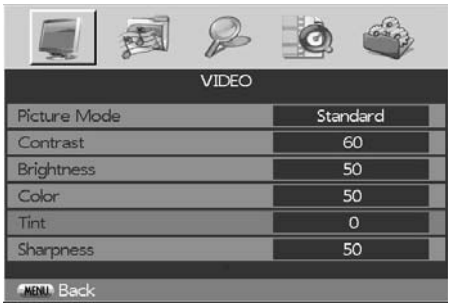
VIDEO → AUDIO → SETUP → TIMER → OPTION

- Press the **MENU** key to invoke the main menu as shown.
- Use **V +/-** key to select the main menu icon, the focused icon will be shown as a protruded button.
- Press the **CH+/-** key to go to the corresponding menu.

Use the following keys to navigate through the secondary menu:

- Press the **CH+/-** key to select menu item, the focused item will be highlighted in yellow.
- Press the **V +/-** key to select the selection, adjust item value, or enter sub menu.
- Exit the OSD mode by either of the following methods:
  1.Wait for Time out (60 seconds default)
  2.Press the **MENU** key

VIDEO menu



To adjust the picture settings, including: Picture Mode, Contrast, Brightness, Color, Tint, Sharpness, Color Temperature, DNR, and Advanced picture settings.

Picture Mode
This option adjusts the mode of the image: User, Standard, Mild and Dynamic.

Contrast
This option adjusts the contrast level of the image.
1.The scale of control should be 0-100. When it is set to 0, the image should not be “Dark”.
2.This control should not affect the OSD Menu itself.

Brightness
This option adjusts the brightness level of the image.
1.The scale of control should be 0-100. When it is set to 0,
The image should not be “Dark”.
2.This control should not affect the OSD Menu itself.

Operation Instructions

Color
This option adjusts the video color saturation level of the image.
1.The scale of control should be 0-100.
2.This item is disabled and can not be selected when in PC source.

Tint
This option adjusts the video tint level of the image.
1.The scale of control should be (-50) (+50).
2.When set the value towards (-50), the image tends to "Red". When set the value towards (+50), the image tends to"Green".
3.This item is only enabled when input signal system is NTSC.

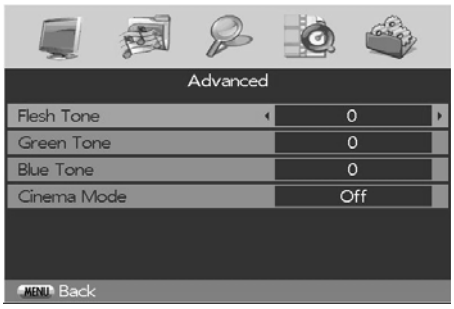
Sharpness
This option adjusts the sharpness level of the image. The scale of control should be 0 -100.

Color Temperature
This option adjusts the color temperature of the image.
The selection of control is Normal, Warm and Cool.

DNR
This option adjusts the dynamic noise reduction level of the image. The selection of control is Off, Auto, Low, Mid and High.

Advanced
This item is to enter the Advanced Picture Menu.
Press the **V +/-** key to enter the Advanced Picture Menu.

Advanced menu



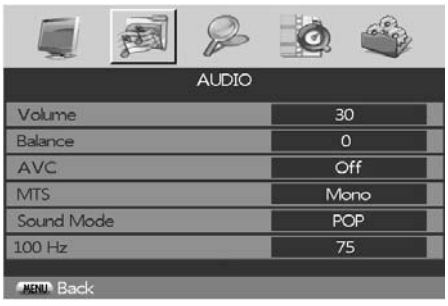
Flesh Tone
This option adjusts the flesh tone level of the image. The scale of control should be 0-2.

Green Tone
This option adjusts the green tone level of the image. The scale of control should be 0-2.

Blue Tone
This option adjusts the blue tone level of the image. The scale of control should be 0-2.

Cinema Mode
This option adjusts the cinema mode of the image. The selection of control is Off and Auto. This item is only enabled when in AV or TV source.

AUDIO menu



To adjust the audio settings, including: Volume, Balance, AVC, MTS, Sound Mode and Equalizer.

Volume
This option adjusts the volume level of sound. The scale of control should be (0)-(100).

Balance
This option adjusts the balance of sound between left and right speakers.
1.The scale of control should be (-50)-(+50).
2.When set the value towards (-50), the sound tends to left.
When set the value towards (+50), the sound tends to right.

AVC(Automatic Volume Correction)
This option switches the AVC function.
The selection of control is On and Off. The AVC function solves annoying volume changes between different sound levels by equalizing the volume level.

MTS (Multichannel Television Sound)
This option switches the MTS mode.
The selection of control is Mono, Stereo and SAP.
This project include sound processing IC for processing the MTS signal conforming to the standard recommended by the Broadcast Television Systems Committee (BTSC).

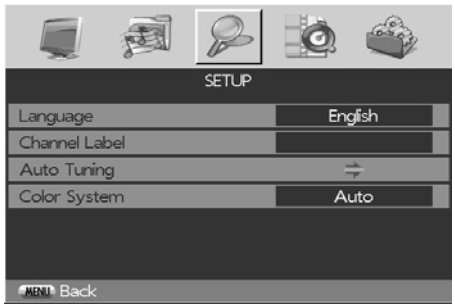
Operation Instructions

Sound Mode
A tone control system designed to compensate for frequency distortion in audio systems.
Entering the Custom mode, you can select the Sound quality instantly among three preset modes and one user-defined mode.(User defined mode)

User → Pop → Rock → Live

Equalizer
A tone control system designed to compensate for frequency distortion in audio systems.
Enter Equalizer, you can select 120HZ, 500HZ, 1.5KHZ, 5KHZ and 10KHZ items by pressing **CH.+** buttons and change the corresponding value of volume by pressing **V+/-** buttons.

Setup menu



Enter setup menu, select Language, Channel Label, Auto Tuning and Color System by pressing **CH.+/-** buttons.

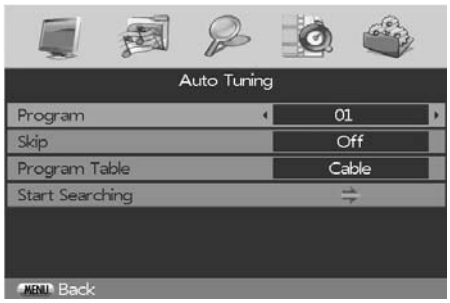
Language
The choices are English, French, Deutsch, Espanol, Italian, Portuguese items.

Channel Label
This item is to enter the program label edit menu. Press the **V+/-** key to enter the program label edit menu.

Auto Tuning
This item is to enter the Auto Tuning Menu. Press the **V+** key to enter the Auto Tuning Menu.

Color system
Press the button to select a new color standard value in TV.
The choices Auto, NTSC 3.58, PAL M, PAL N.

Auto Tuning menu



Program
This item is to change the current program number.
1.Press the **V+/-** key to change the current program number.
2.Press number key to directly input the current program number.

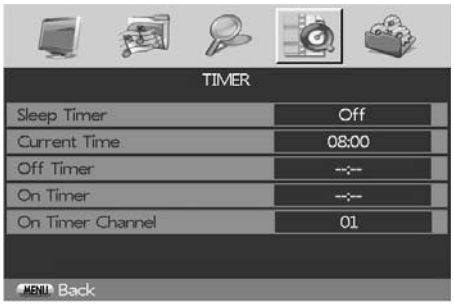
Skip
This item is to change the skip option of the current program.
The selection of control is On and Off. When the skip option of the current program is On, user can not get to this program by press **CH.+/-**, but the direct number key is working.

Program Table
This item is to change the Program Table option of the current program. The selection of control is Air and Table.
When the Program Table option of the current program is Air, The program is by Air, vice versa Cable.

Start Searching
This item is to enter the Auto Tuning Menu.
1.Press the **V+** key to start auto tuning. After starting auto tuning, Auto Tuning status will be shown.
2.The status bar shows the searching progress of the whole frequency band, including VHF-L, VHF-H and UHF.
3.The program position number is the number that next searched program will be stored. It starts from program number “1”.

4.Press the **MENU** key to exit all Menus and terminate the auto tuning process. The Searched programs are stored.
5.When the whole band is searched over, or position number exceed maximum, the auto tuning process is terminated.
6.Positions that don't store a channel in the searching process are stored with “skip on”.

Timer menu



Enter timer menu, select Sleep Timer, Current Time, Off Timer, On Timer and On Timer Channel items by pressing **CH.+/-** buttons.

Sleep Timer
The choices are 15 minutes, 30 minutes, 45 minutes, 60 minutes, 90 minutes, 120 minutes and OFF. During the last 30 seconds of the preset sleep time, the sleep timer indicator is displayed in the upper center of the screen and remain there until the TV switches auto maticlly to stand-by.

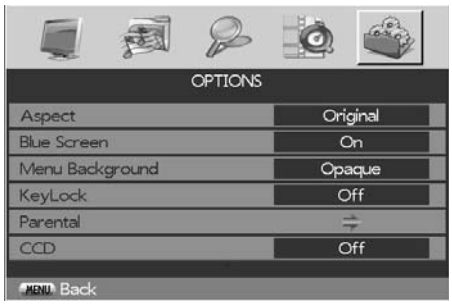
Current Time
The option adjusts the current time, the unit is minute.
You can use 0-9 digit button or **V+/-** button to set it.

Off Timer
This option adjusts the automatically power off timer.
The unit is minute.
Once the timer is set to a non-zero time, it is enabled and the number decreases every minute. When the timer runsto zero, it triggers the power off action.
1.Press the **V+/-** key to change the timer number.
2.Continuously press down the **V+/-** key to change the timer number by 30 minutes.
3.Press number key to directly input the timer number.

On Timer
This option adjusts the automatically power on timer.
The unit is minute.
Once the timer is set to a non-zero time, it is enabled and the number decreases every minute. When the timer runs to zero, it triggers the power on action (in power off status) or the program change action (in power on status).
1.Press the **V+/-** key to change the timer number.
2.Continuously press down the **V+/-** key to change the timer number by 30 minutes.
3.Press number key to directly input the timer number.

On Timer Channel
This option adjusts the automatically power on program position. The position is the program that system changes to when the on timer triggers.
1.Press the **V+/-** key to change the program position.
2.Continuously press down the **V+/-** key to change the program position by 10.
3.Press number key to directly input the program position.

Option menu



Enter option menu, select Aspect, Blue Screen, Menu Background , Key Lock, Parental and CCD items by pressing**CH.+/-** buttons.

Aspect
TV/AV source, press this button to select:
Original /16:9 / 16:9 Zoom/ 16:9 Sub/14:9/ 14:9 Zoom/4:3/4:3Zoom.
VGA/YPbPr/HDMI source, press this button to select:Original / 16:9 and 4:3.

Blue Screen
This option switches the blue screen function.
The selection of control is On and Off. When this function is enabled, a blue screen will be shown in case of no signal status in TV source.

Menu Background
This option adjust the Menu Background the selection of control is transparent and opaque.

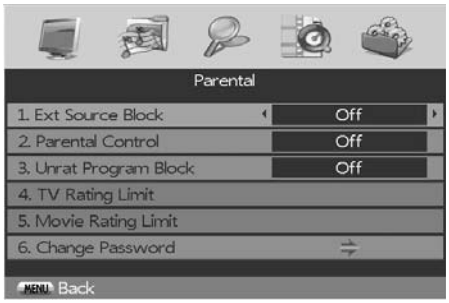
Key Lock
This option switches the key lock function.
The selection of control is On and Off. When this function is enabled, the keyboard will be locked and can not be used.

Operation Instructions

Parental
This item is to enter the Parental Menu. Before entering Parental Menu, password needs to be checked.
1.Press the **V+/-** key to enter the Password menu.
2.Input Password. If user input a right 6-digital password saved in EEPROM or default password (123456), system will enter Parental Menu, otherwise return to Function Menu.

CCD
This option adjusts the setting of Closed Captioning channel.
The selection of control is Off, CC1, CC2, CC3, CC4, Text1, Text2, Text3, Text4 and XDS.

Parental Menu



Parental Menu(V-Chip Menu)
Input the password 123456 to enter V-Chip menu.
Enter parental menu, you can select Ext Source Block, Parental Control, Unrat Program Block, TV Rating Limit, Movie Rating Limit and Change Password items by pressing **CH.+/-** Buttons.

1.Ext Source Block
This option switches the output Block Function.
The selection of control is off and on.

2.Parental Control
This option adjusts the setting of Parental control type.
The selection of control is Off, Child, Youth, Youth Adult, Custom.
If select Off, Child, Youth, Youth Adult, Block option uses default setting. See the table below.

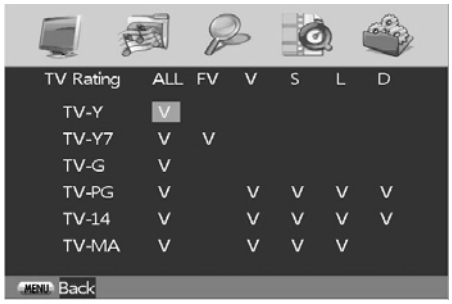
	TV-Y	TV-Y7	TV-G	TV-PG	TV-14	TV-MA	M-G	M-PG	M-PG13	M-R	M-NC17
Off	V	V	V	V	V	V	V	V	V	V	V
Child	V	V	V	B	B	B	V	B	B	B	B
Youth	V	V	V	V	B	B	V	V	V	B	B
Youth Adult	V	V	V	V	V	B	V	V	V	V	V

If select custom, Block option can be edited by user. See TV Rating Menu, Moving Rating Menu.

3.Unrat Program Block
This option switches the Program block Function
The selection of control is Off and On. When On is selected, it will Block all Ratings.

Operation Instructions

TV Rating Limit



4.TV Rating Limit
Press the **V+/-** key to enter the TV Rating menu.
User can edit the block option between V(view) to B(block).
Press **V+/-** key to change V (View)/B (Block) status, Press **CH.+/-** key to select items needed to edit.

Moving Rating Limit

5.Moving Rating Limit
Press the **V+/-** key to enter the Moving Rating menu.
User can edit the block. Press **V+/-** key to change V/B status, Press **CH.+/-** key to select items needed to edit.

Change Password

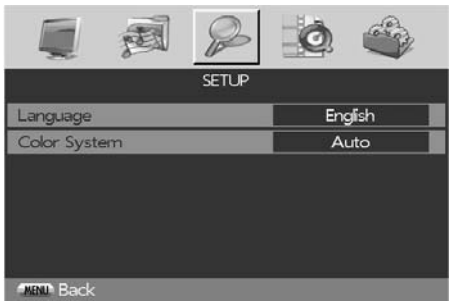
6.Change Password
Press the **V+/-** key to enter the Change Password menu.

Old Password
Input old Password. Before entering input status, user should press **V+** key first. After user input a right 6-digital password saved in EEPROM or default password (111111), system will go into input New Password status automatically.

New Password
Input new Password. After user input a 6-digital new password, system will go into input New Password Again status automatically.

New Password Again
Confirm New Password. If New Password Again and New Password are the same, New Password is accepted.

AV MODE



Enter setup menu, select Language and color system by pressing **CH.+/-** buttons.

Language
The choices are English, French, Deutsch, Espanol, Italian, Portuguese items.

Color system
Press the button to select a new color standard value in AV.
The choices Auto, NTSC 3.58, PAL M, PAL N.

Operation Instructions

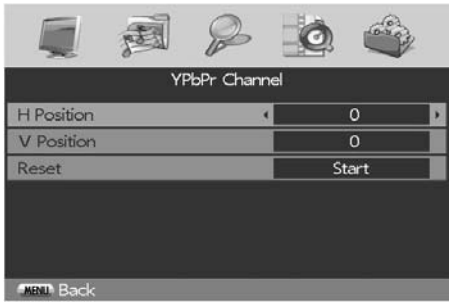
YPbPr MODE

Enter setup menu, select Language and YPbPr Channel by pressing **CH.+/-** buttons.

Language
The choices are English, French, Deutsch, Espanol, Italian, Portuguese items.

YPbPr Channel
Press the button to select H Position, V Position and Reset.

YPbPr Channel



H Position
This option adjust the H Position of the image.
The scale of control should be(-10)-(+10).

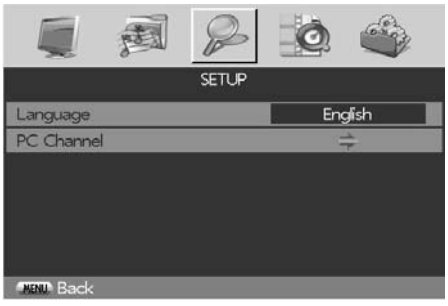
V Position
This option adjust the V Position of the image.
The scale of control should be (-10)-(+10).

Reset
The item resets the above setting to default value.
Press the **V+** key to reset settings.

YPbPr Input Resolutions
YPbPr input typical display modes. The following table is an illustration of some of the typical video display modes.

1	480i
2	480p
3	576i
4	576p
5	720p(50/60Hz)
6	1080i(50/60Hz)

PC MODE



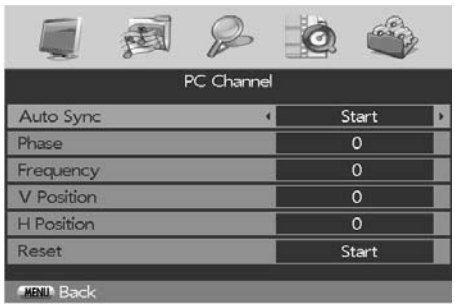
Enter setup menu, select Language and PC Channel by pressing **CH.+/-** buttons.

Language
The choices are English, French, Deutsch, Espanol, Italian, Portuguese items.

PC Channel
Press the button to select Auto Sync, Phase, Frequency, V Position, H Position and Reset.

Operation Instructions

PC Channel



Auto Sync
This item is to automatically setup the position settings of the current PC signal.
Press the **V+** key to start auto sync.

Phase
This option adjusts the phase of the signal.
The scale of control should be(-10)-(+10).

Frequency
This option adjust the Frequency of the image.
The scale of control should be (-10)-(+10).

V Position
This option adjust the V Position of the image.
The scale of control should be (-10)-(+10).

H Position
This option adjust the H Position of the image.
The scale of control should be(-10)-(+10).

Reset
The item resets the above setting to default value.
Press the **V+** key to reset settings.

PC Input Resolutions
PC Input typical display modes. The following table is an illustration of some of the typical video display modes.

1	640X480(recommend 60Hz)
2	800X600(recommend 60Hz)
3	1024X768(recommend 60Hz)
4	480p
5	576p
6	720p(50/60Hz)
7	1080i(50/60Hz)

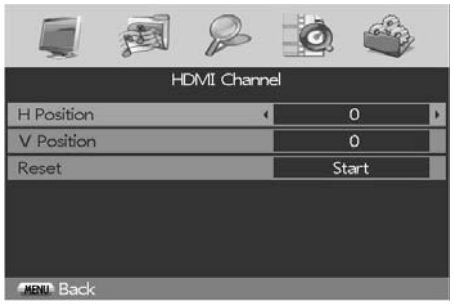
HDMI MODE

Enter setup menu, select Language and HDMI Channel by pressing **CH.+/-** buttons.

Language
The choices are English, French, Deutsch, Espanol, Italian, Portuguese items.

HDMI Channel
Press the button to select V Position, H Position and Reset.

HDMI Channel



H Position
This option adjust the H Position of the image.
The scale of control should be(-10)-(+10).

V Position
This option adjust the V Position of the image.
The scale of control should be (-10)-(+10).

Reset
The item resets the above setting to default value.
Press the **V+** key to reset settings.

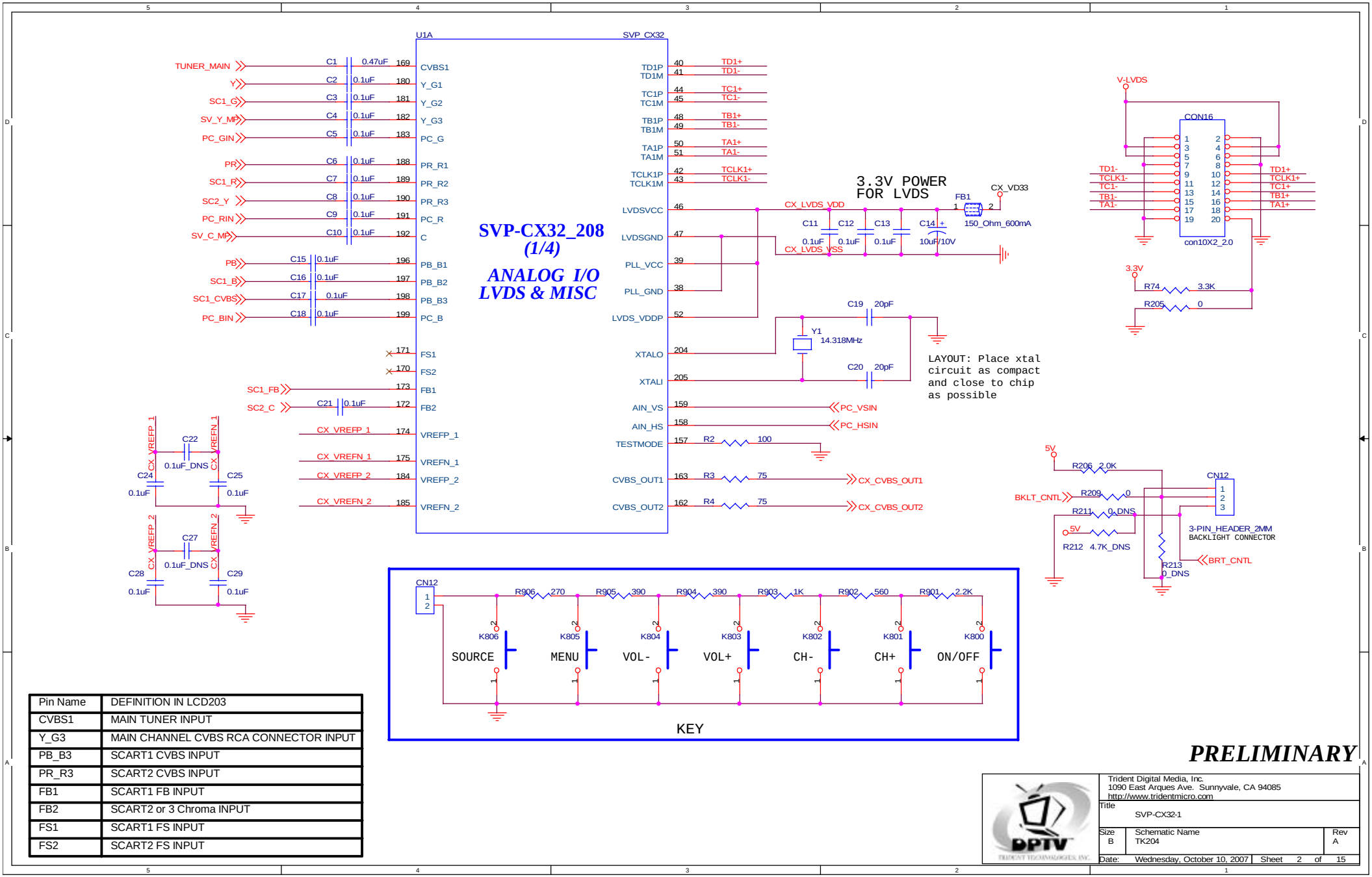
HDMI Input Resolutions
HDMI Input typical display modes. The following table is an illustration of some of the typical video display modes.

1	640X480(recommend 60Hz)
2	800X600(recommend 60Hz)
3	1024X768(recommend 60Hz)
4	480p
5	576p
6	720p(50/60Hz)
7	1080i(50/60Hz)

Service Tips

BEFORE CALLING FOR SERVICE, HAVE YOU CHECKED (●) THE FOLLOWING CHART ON SYMPTOMS AND SOLUTIONS?

Symptoms \ Solution	Try different channel, if OK, probably station trouble	Check aerial connections on back of set	Check aerial for broken wires	Re-orient aerial (if indoor type)	Probably local interference, such as an appliance	Adjust fine tuning control	Adjust brightness control	Adjust contrast control	Check if station is broadcasting colour	Adjust colour control	Check if system switch is correct	Check if on/off switch is "on"	Check Batteries in Remote control
No picture, no sound	●	●	●			●					●	●	
Poor sound, picture OK	●			●	●	●					●		
Poor picture, sound OK	●	●	●	●	●	●	●				●		
Weak picture	●	●	●	●		●					●		
Blurred picture	●		●	●		●					●		
Double image	●	●	●	●		●							
Lines in picture	●		●	●	●	●							
Distorted picture	●		●	●		●					●		
Weak reception on some channels	●	●	●	●	●	●					●		
Horizontal bars			●	●	●								
Picture rolls vertically	●		●	●	●						●		
Poor colour	●	●	●	●	●	●	●	●		●	●		
No colour	●	●	●	●		●			●	●	●		
Misoperation of Remote control													●
No Remote control													●
On Screen Display Control outside the screen											●		



Pin Name	DEFINITION IN LCD203
CVBS1	MAIN TUNER INPUT
Y_G3	MAIN CHANNEL CVBS RCA CONNECTOR INPUT
PB_B3	SCART1 CVBS INPUT
PR_R3	SCART2 CVBS INPUT
FB1	SCART1 FB INPUT
FB2	SCART2 or 3 Chroma INPUT
FS1	SCART1 FS INPUT
FS2	SCART2 FS INPUT

PRELIMINARY

Trident Digital Media, Inc.
1090 East Arques Ave. Sunnyvale, CA 94085
http://www.tridentmicro.com

Title: SVP-CX32-1

Size: B | Schematic Name: TK204 | Rev: A

Date: Wednesday, October 10, 2007 | Sheet 2 of 15

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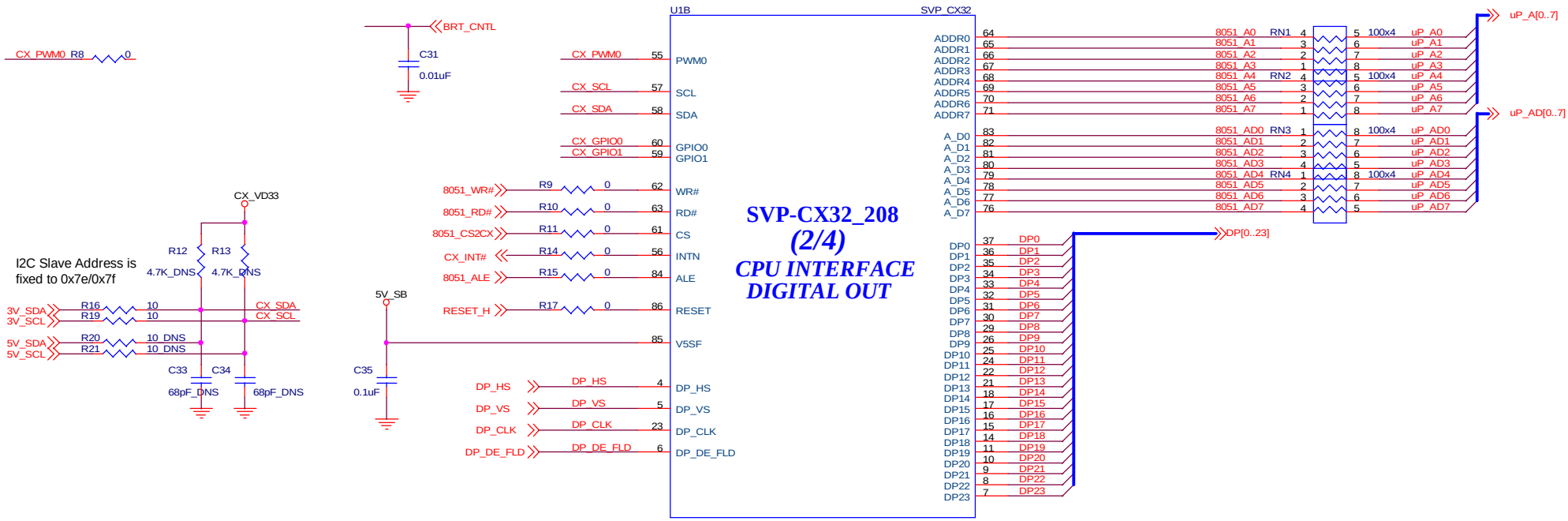

Pin Name	Pin No.	1 (HIGH)	0 (LOW)
GPIO0		MPU in A/D Multiplix Mode	MPU in A/D Separate Mode
GPIO1		Use Rising Edge of WR# to latch data	Use Falling Edge of WR# to latch data

PRELIMINARY

Trident Digital Media, Inc.
1090 East Arques Ave. Sunnyvale, CA 94085
http://www.tridentmicro.com

Title: SVP-CX32-2

Size: B | Schematic Name: TK204 | Rev: A

Date: Wednesday, October 10, 2007 | Sheet 3 of 15

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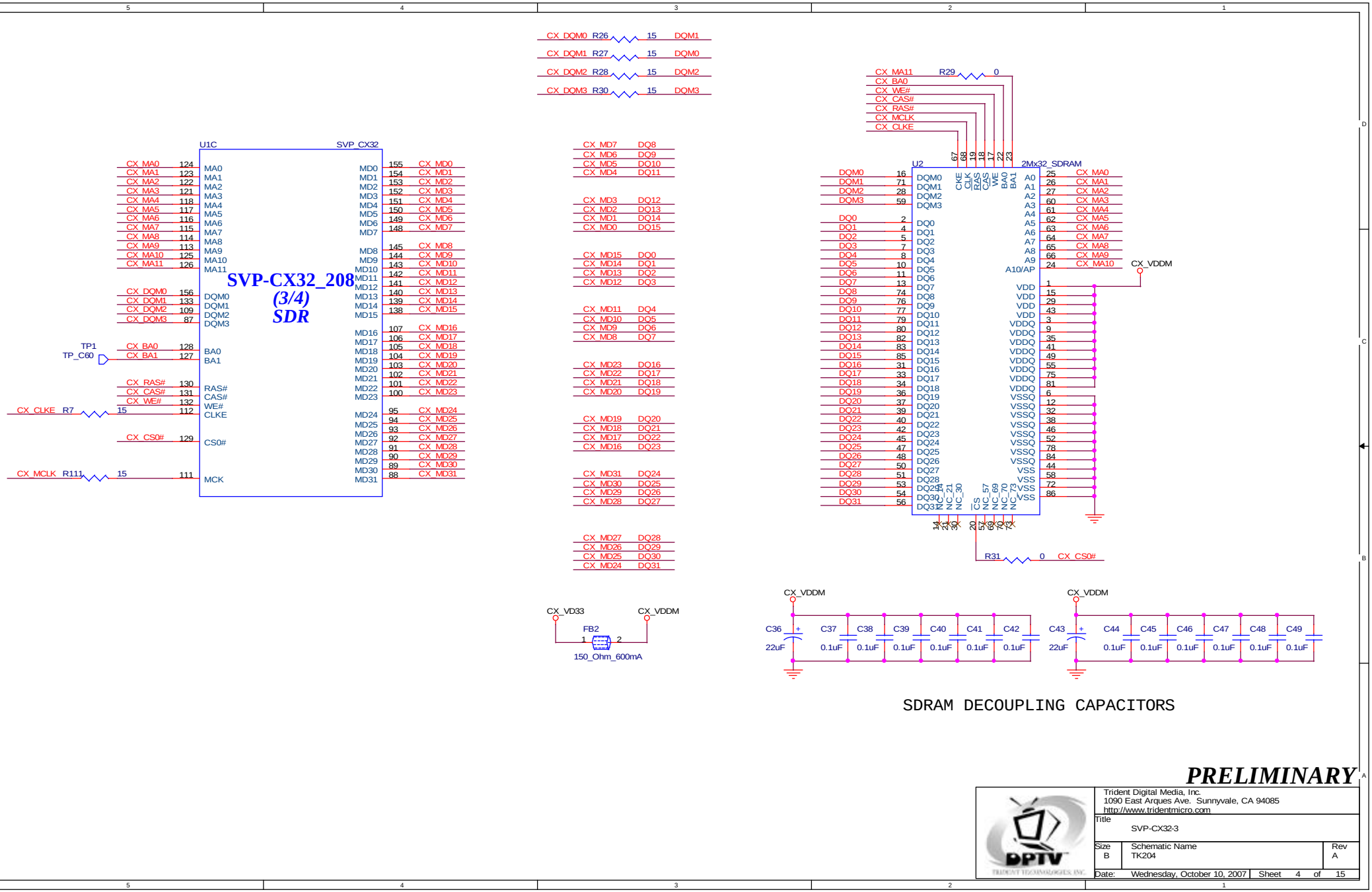

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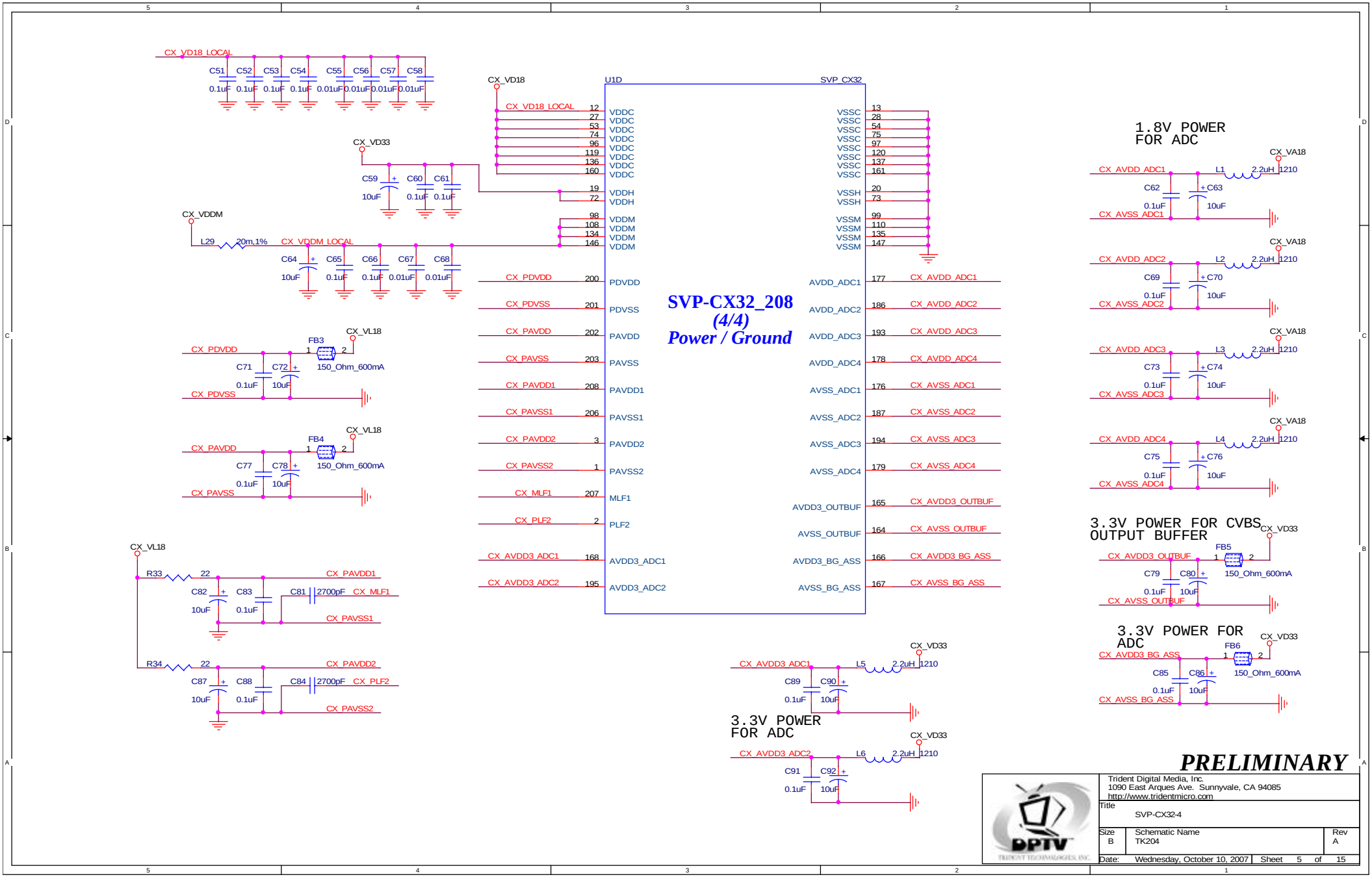

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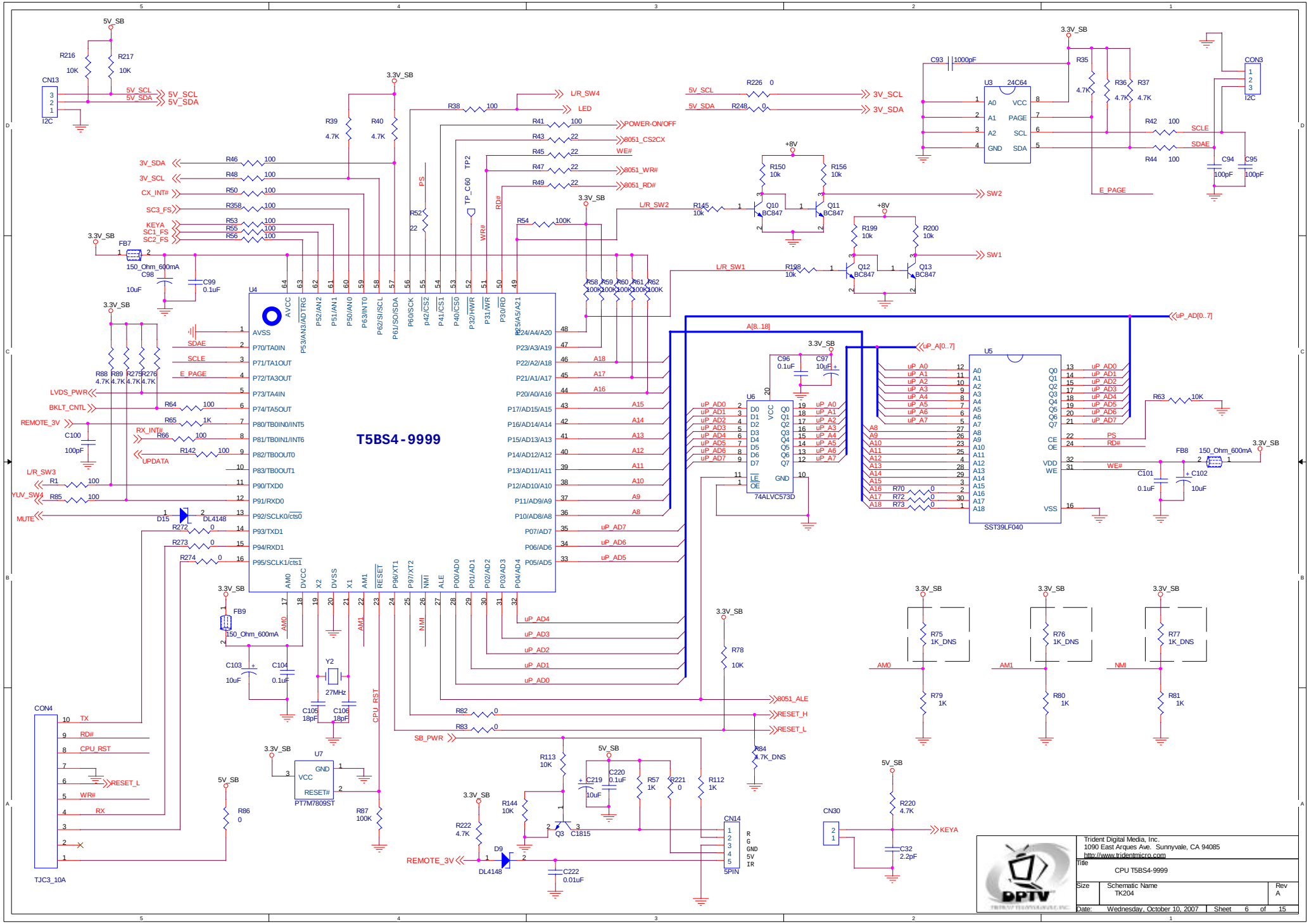

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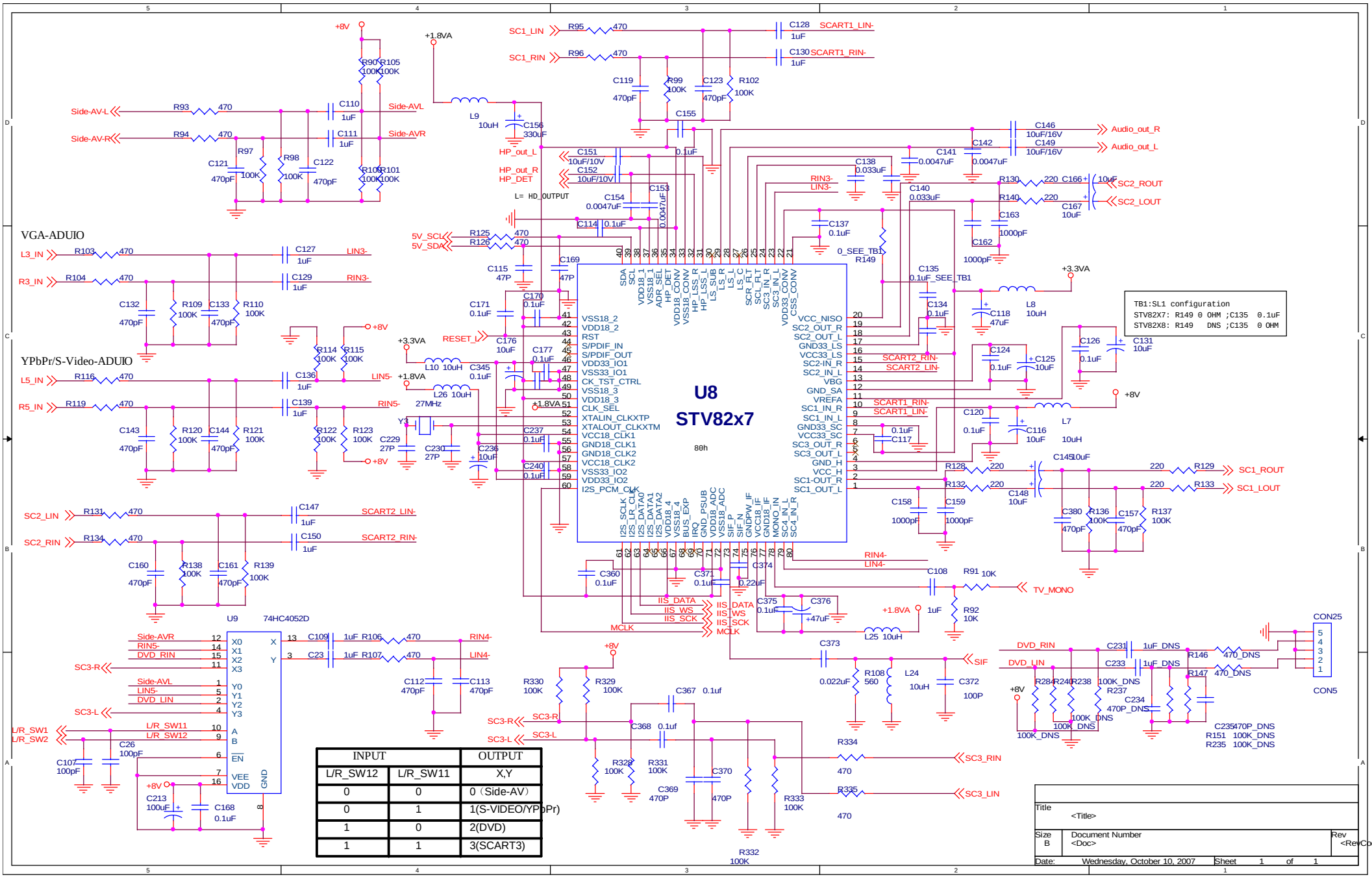

INPUT		OUTPUT
L/R_SW12	L/R_SW11	X,Y
0	0	0（Side-AV）
0	1	1(S-VIDEO/YPbPr)
1	0	2(DVD)
1	1	3(SCART3)

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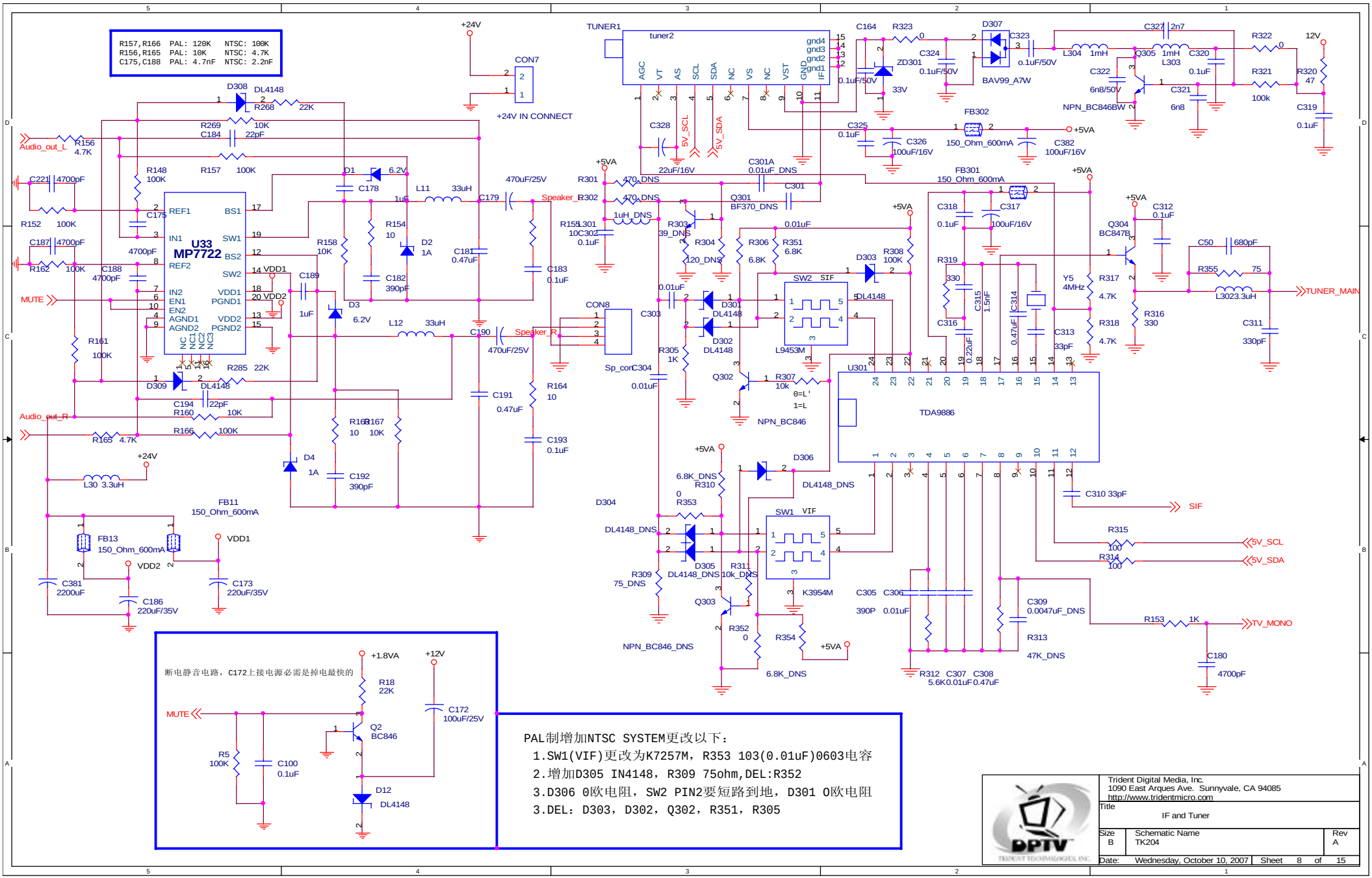

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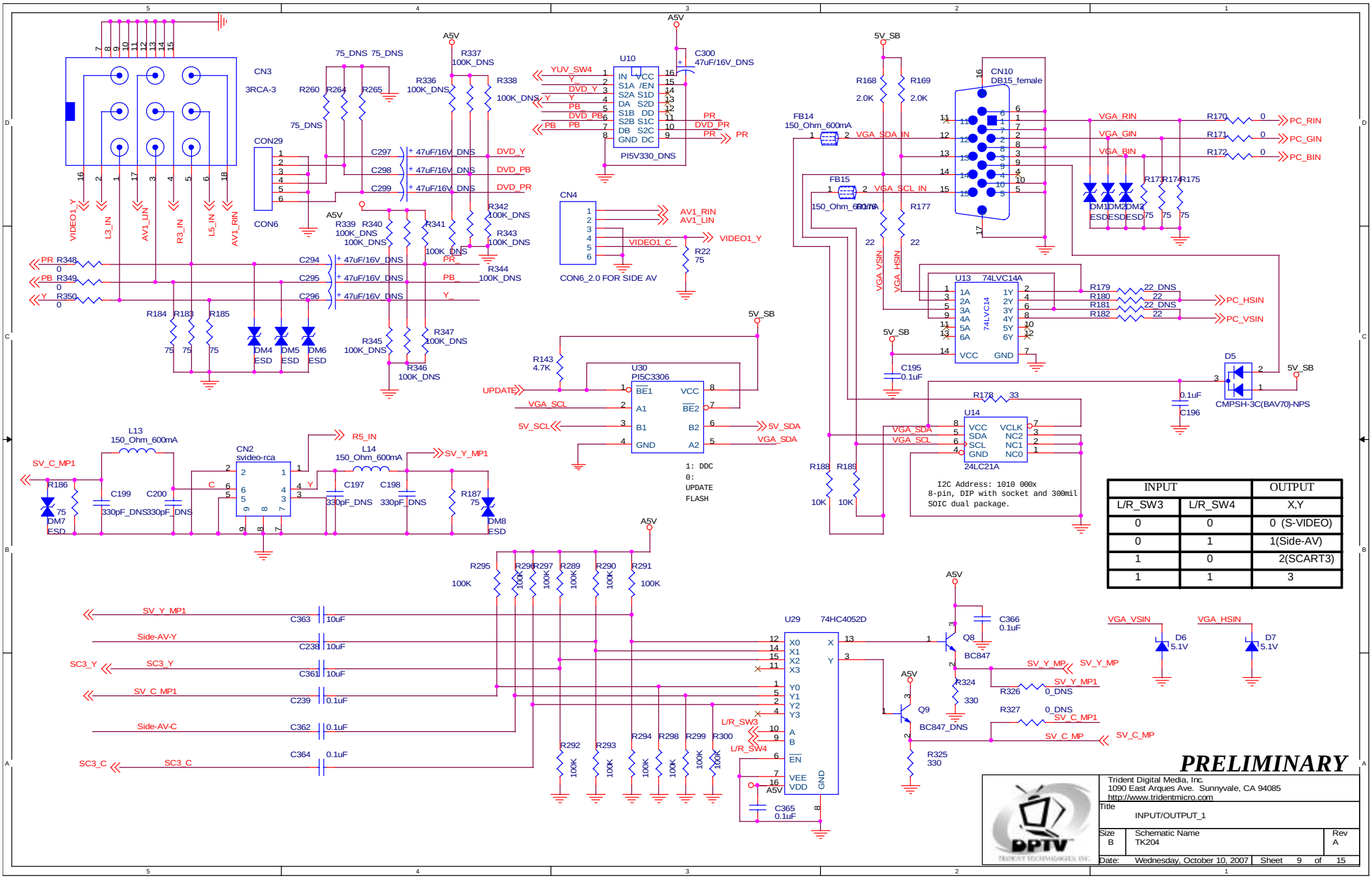

INPUT		OUTPUT
L/R_SW3	L/R_SW4	X,Y
0	0	0 (S-VIDEO)
0	1	1(Side-AV)
1	0	2(SCART3)
1	1	3

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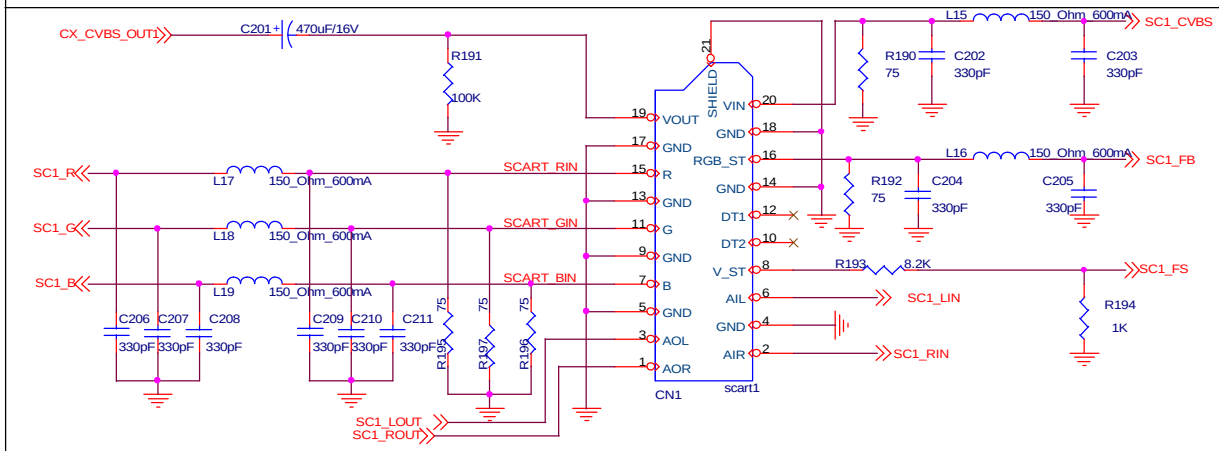
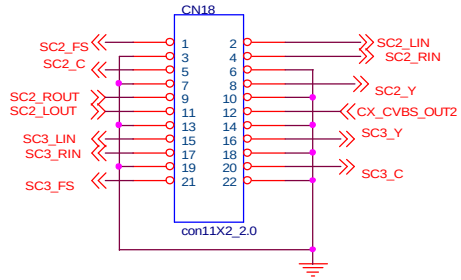


App lication	SCART input voltage range	voltage range at pin
AV MODE	0...12 V	0...1.304V

ADC-slices	0...16.7% of 1.304V	37.5...58.3% of 1.304V	79.2...100% of 1.304V
AV-mode level	LOW TV mode	Middle Wide screen	High A/V_MODE



注：scart1和scart2共用audio、video输出

Trident Digital Media, Inc.
1090 East Arques Ave. Sunnyvale, CA 94085
http://www.tridentmicro.com

Title: INPUT/OUTPUT_2

Size: B | Schematic Name: TK204 | Rev: A

Date: Wednesday, October 10, 2007 | Sheet 10 of 15

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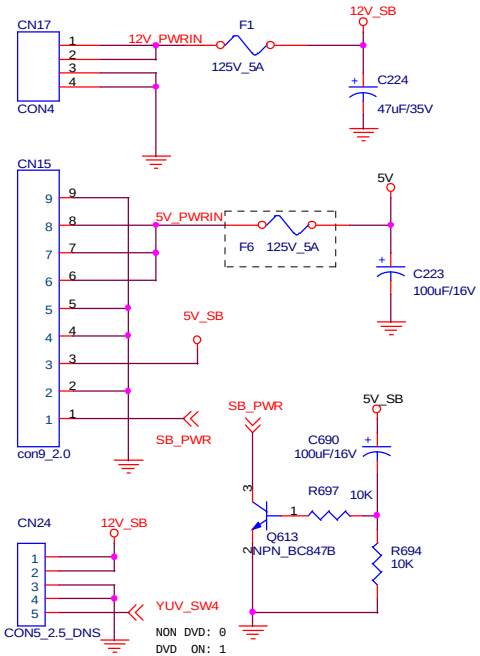
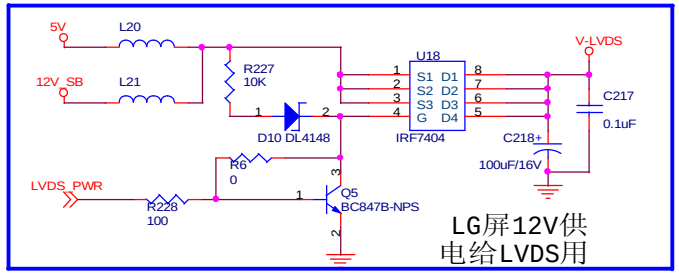
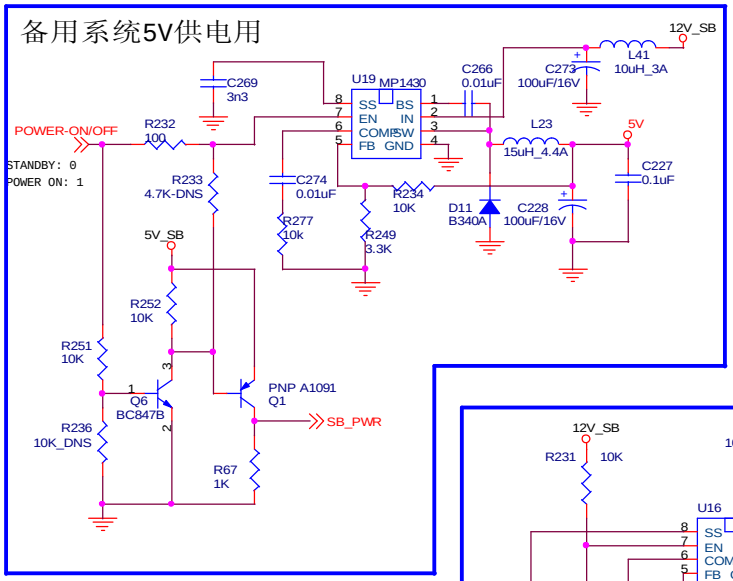
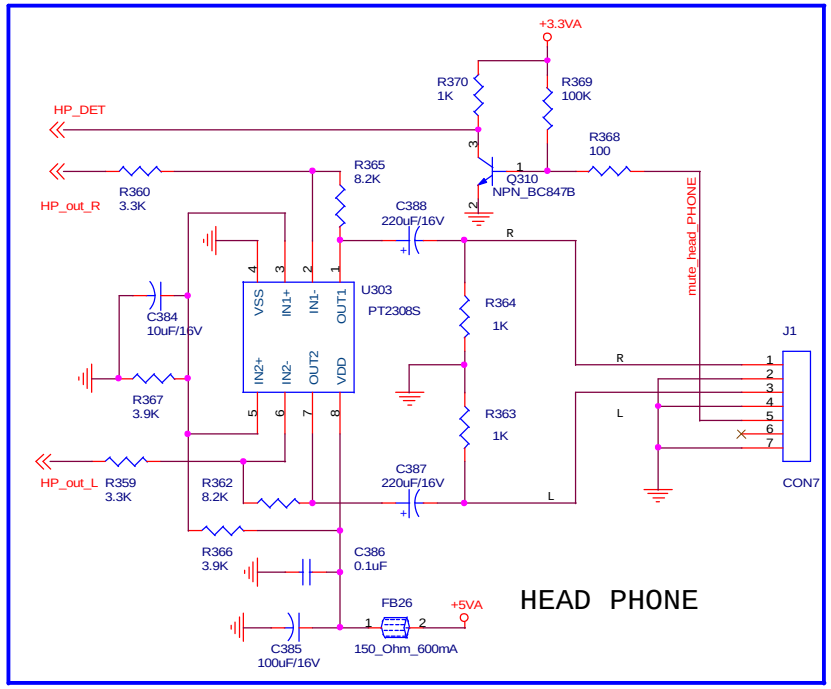
To Use +12DC Power Jack or PC Power Jack with +12 only: Remove F6 .

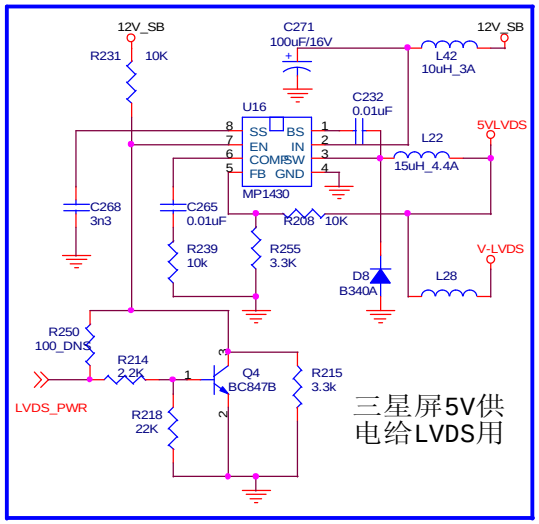
Power Jack

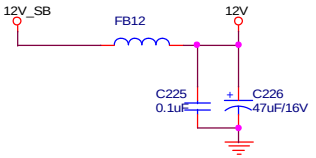




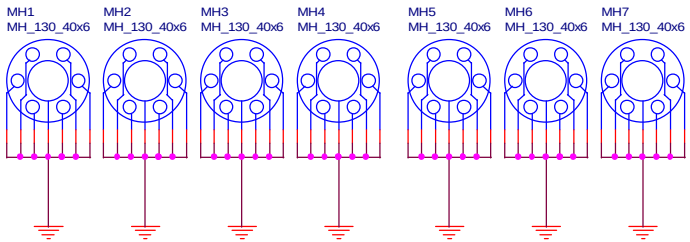








These four holes are in four corners of PCB.



PRELIMINARY

DPTV TRIDENT TECHNOLOGIES, INC.	Trident Digital Media, Inc. 1090 East Arques Ave. Sunnyvale, CA 94085 http://www.tridentmicro.com	
	Title: POWER 1: LDO REGULATORS	
	Size: B — Schematic Name: TK204	Rev: A
	Date: Wednesday, October 10, 2007 — Sheet 12 of 15	

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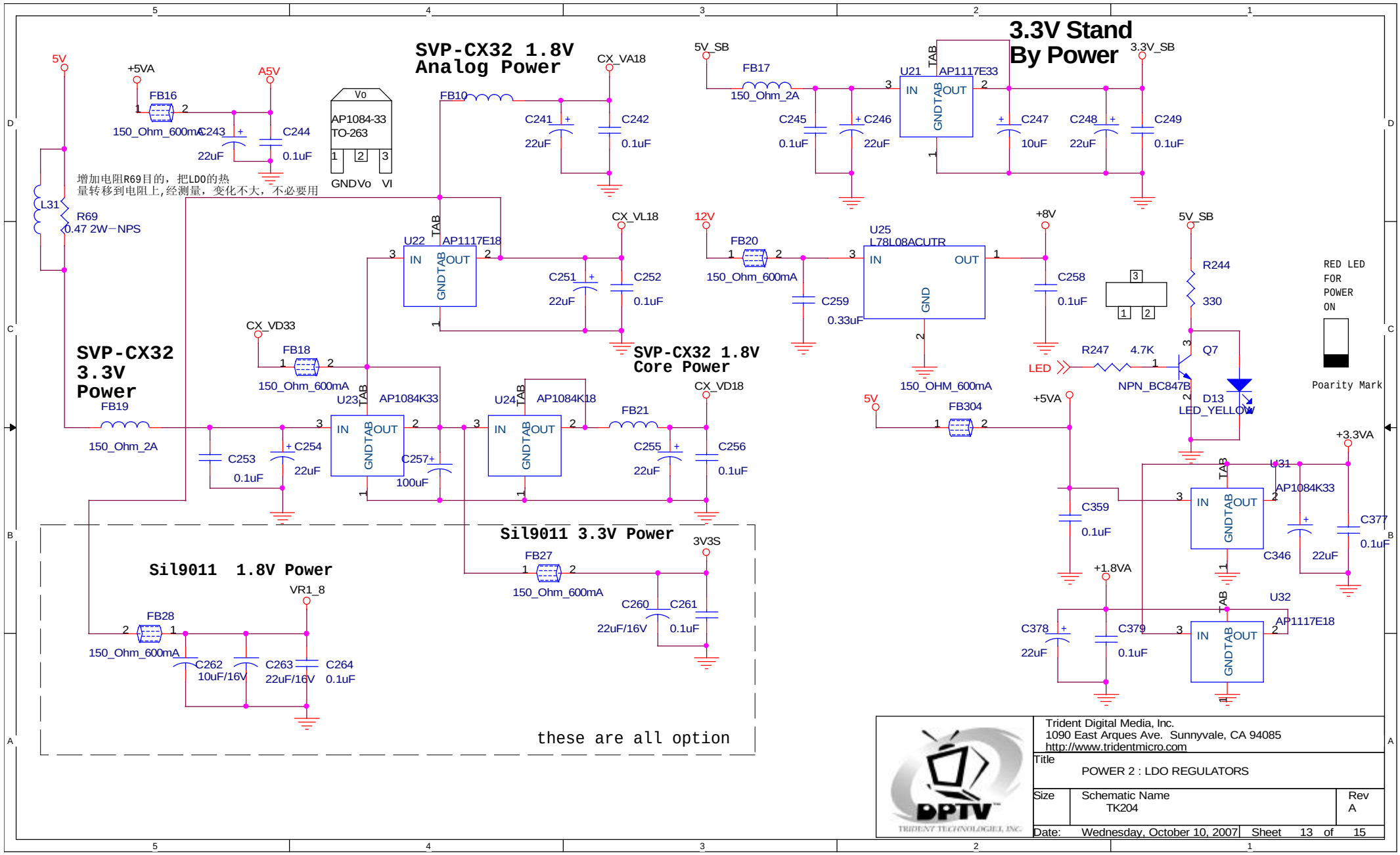

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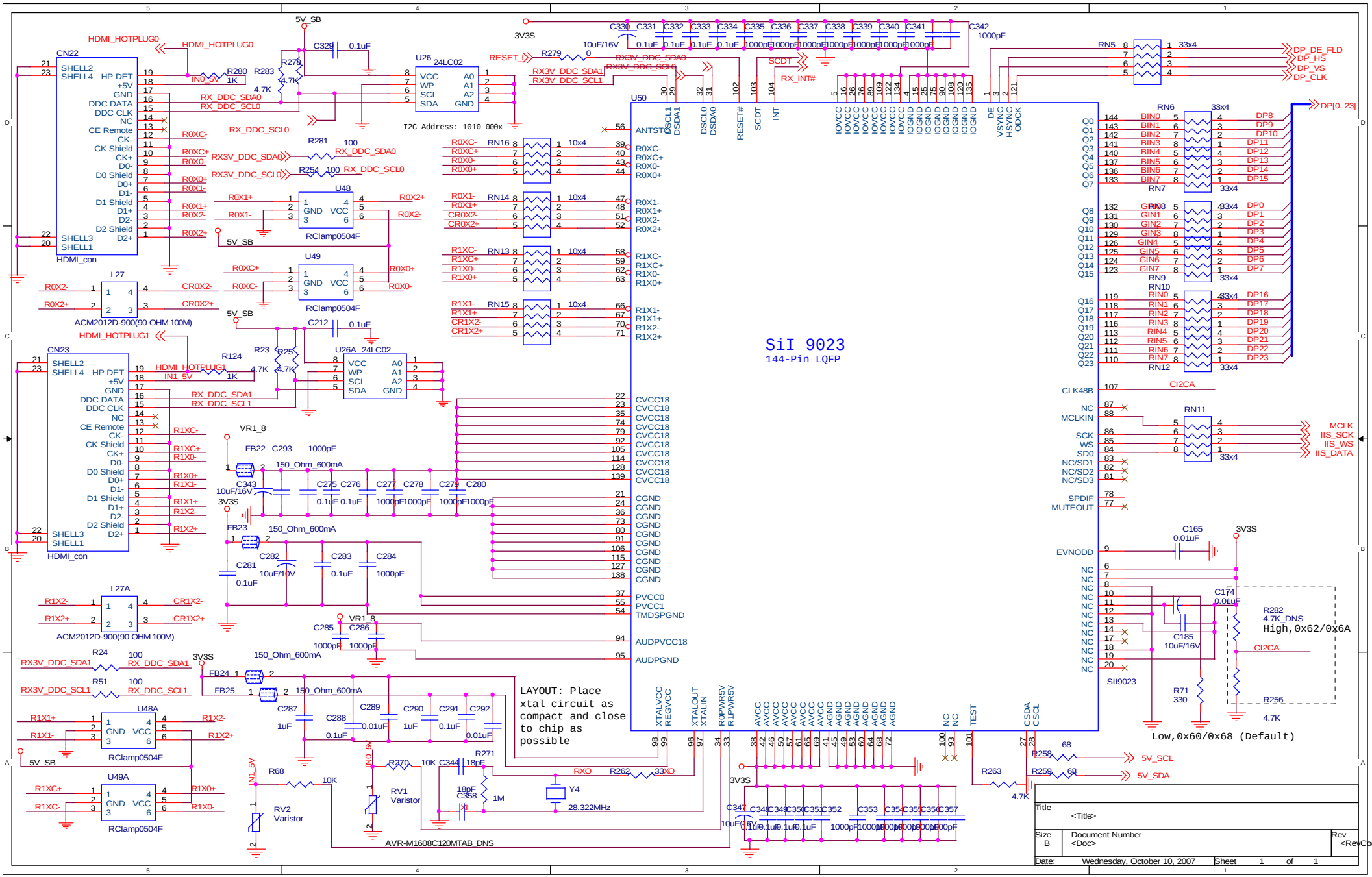

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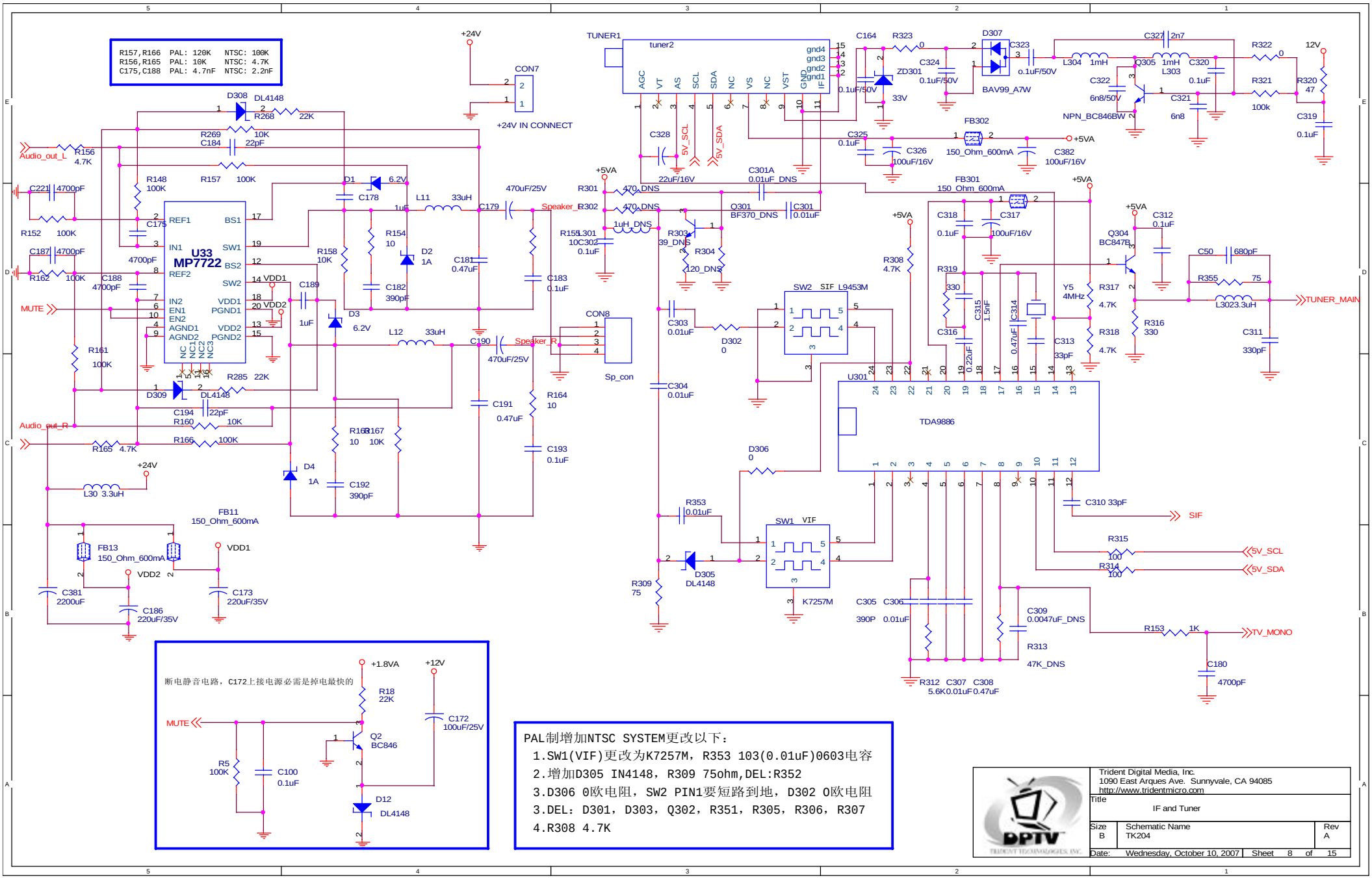

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